

Sedona Traffic Model - Development, Calibration and Validation Report

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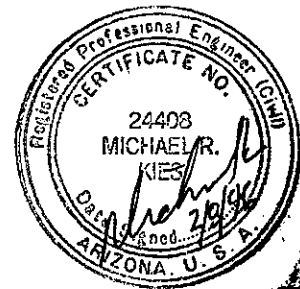
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Sedona Traffic Model - Development, Calibration, and Validation Report

Introduction

Over the next few months, the City of Sedona will be completing circulation system assessments and implementing programs to enhance their transportation system. These include the Sedona Highway Corridor Circulation System Improvements Assessment, the West Sedona Off-Highway Circulation System Improvements Needs Analysis, an updated Capitol Improvement Program, and a Developer Mitigation Program. Key to these studies is a comprehensive traffic model providing the basis for analyzing current and projected traffic patterns. The model must consist of current and accurate information to reliably support the conclusions and recommendations made in the studies.

CH2M HILL was tasked by the City to review the existing areawide traffic model (PBQD), and to update it for the studies contemplated. This report documents the steps taken in the development and calibration of the City of Sedona Traffic Model.

Background

The City of Sedona is experiencing rapid growth in population and tourism. In the years from 1980 to 1990, the City has experienced a 4% average annual population growth rate alone, accompanied by an undetermined but significant growth in tourism. Such growth places an ever-increasing burden on the existing transportation system. Recognizing the need to improve the system, the City commissioned the "Sedona Area Transportation Study" (PBQD, July 1991). Its focus was to identify potential corridors where improvements to the existing transportation system could alleviate congestion in the future. A traffic model was created using the TRANPLAN software to forecast future traffic in support of the areawide transportation study.

The City of Sedona is interested in investigating specific alternative solutions along some of the corridors identified in the area-wide study. To accomplish this, detailed traffic analyses will be performed, which require refinement of the traffic model prepared for the area-wide study. Therefore, the Sedona Traffic Model was updated and re-calibrated to provide the detail and flexibility necessary for supporting analysis of specific locations. Socio-economic data from the 1990 Census (completed since the areawide transportation study was performed), will be incorporated into the re-calibrated model.

It is anticipated that the Sedona Traffic Model will also be used to help quantify developer participation for transportation improvements, and to evaluate proposed improvements. The model will aid in the determination of traffic impacts directly attributed to proposed developments and provide a standard method to determine funding participation.

Study Area

The study area limits used for the Sedona Traffic Model are the same as those in the areawide transportation study. In addition to the City of Sedona, the study limits encompass some unincorporated areas of Yavapai and Coconino Counties including the Village of Oak Creek, and Red Rock Loop Area. The study area limits are depicted in Figure 1.

Selection of Modeling Software

Once developed, the City intends to use the traffic model for managing their development and transportation needs. City staff will be maintaining it as part of their overall data base system. Therefore, the initial task in the development of the traffic model was to review various market software and select the software package that meets the City's needs. The following paragraphs summarize the selection process.

Comparison of Software

Several software packages were compared including EMME/2, MINUTP, QRSII, TMODEL, and TRANPLAN. The packages were compared to each other with respect to certain criteria including cost, compatibility with other agencies, ability to interface with ArcInfo GIS, compatibility with the City's current hardware, and user interface. The criteria were rated for each of the software packages based on a relative ranking of their ability to meet the City's needs. Although this is somewhat of a subjective approach, it is sufficient for making the proper selection. The following summarizes the findings.

Table 1. Comparison of Traffic Modeling Software

<i>Package</i>	<i>Cost</i>	<i>Agency Compatible</i>	<i>GIS Interface</i>	<i>Hardware Compatible</i>	<i>User Interface</i>
EMME/2	\$ 20,000+	FAIR	GOOD	POOR	FAIR
MINUTP	\$ 2,800	POOR	FAIR	GOOD	FAIR
QRS II	\$ 800	POOR	POOR	GOOD	GOOD
TMODEL	\$ 3,200	POOR	FAIR	GOOD	FAIR
TRANPLAN	\$ 8,000	GOOD	GOOD	GOOD	POOR

Discussion

EMME/2. This is a large program designed for large metropolitan areas. It runs from a mainframe computer and is very high in cost. This program is not recommended to be used by the City of Sedona because of the high cost and incompatibility with the City's current hardware.

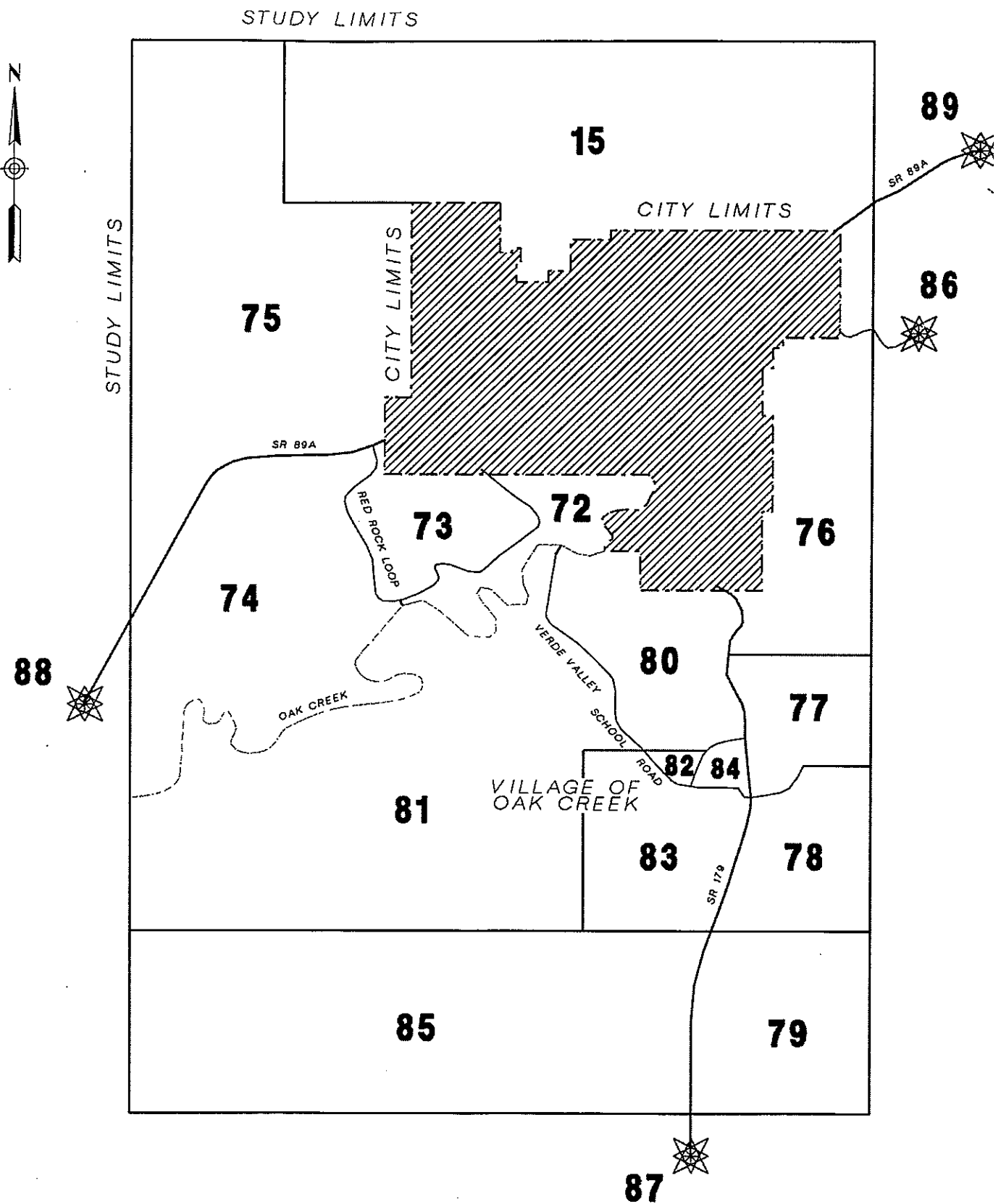


FIGURE 1
STUDY LIMITS AND COUNTY TAZ LIMITS

✱ EXTERNAL TAZ LOCATIONS

MINUTP. This is a moderately priced software that runs on an IBM-compatible PC, and is reasonably compatible with the City's ArcInfo GIS system.. It is primarily used by agencies in the Pacific Northwest, but it's use among Arizona agencies is very limited. Not having the compatibility with the state or counties keeps data from being shared by the agencies, which is not in the City's interest. Support for the software is likely to be limited. For these reasons, the software is not recommended for use by the City.

QRS II. This is an inexpensive software used for small and relatively simple networks. It offers no interface with ArcInfo GIS systems, and is used by only a couple of Arizona agencies. The program has a very good user interface, and runs on a IBM-compatible PC. However, the software is not recommended because of its incompatibility with GIS systems and other Arizona agencies.

TMODEL. This is another moderately priced software package that runs on a IBM-compatible PC. The user interface is straight forward, but requires data to be entered from an ASCII file. It is used by a few agencies in Arizona, and a GIS interface package add-on is available. The software meets some of the City's basic needs, but lacks the overall sophistication and flexibility desired.

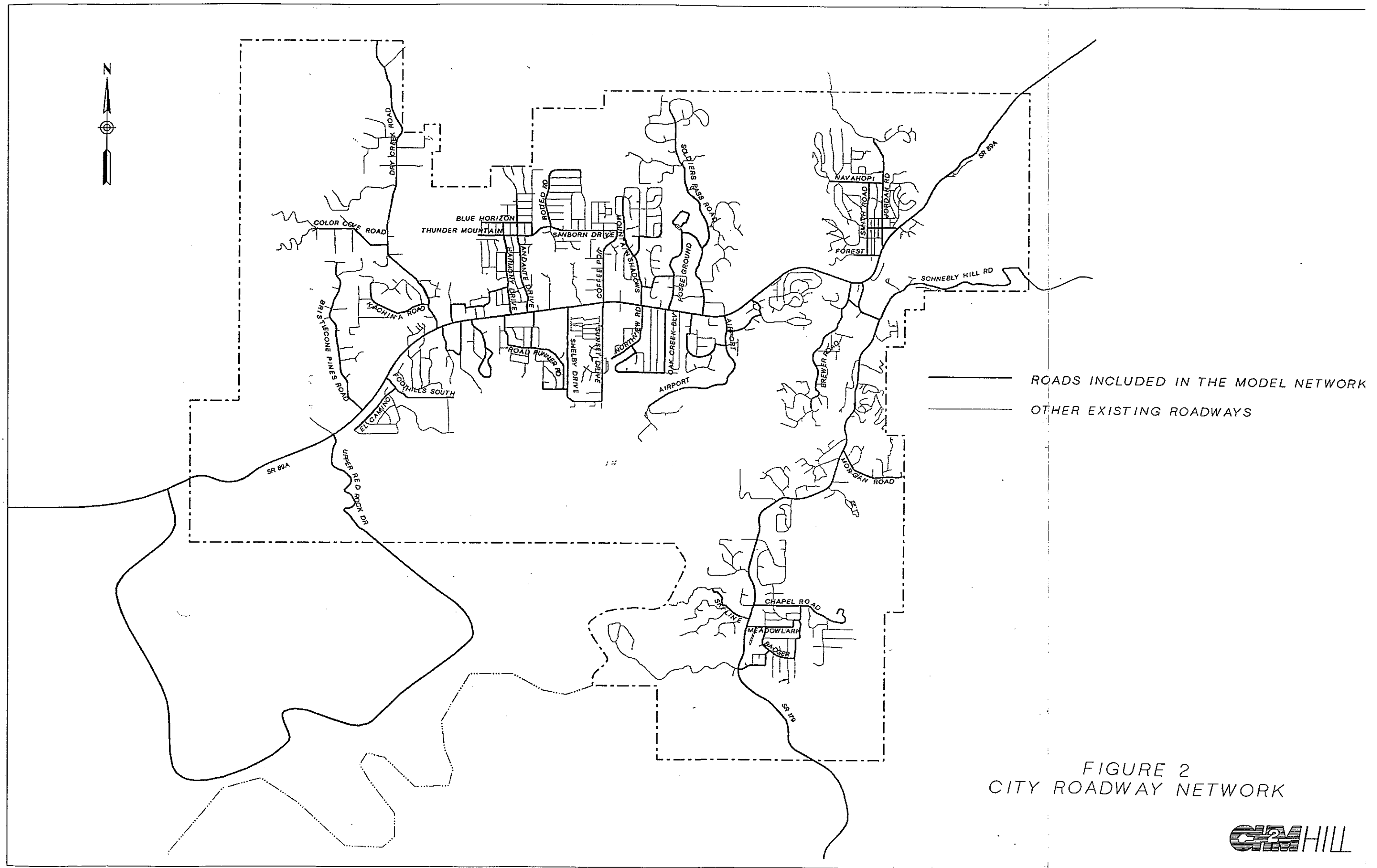
TRANPLAN. This is a very reliable program that has been used by agencies throughout the country for nearly 30 years. Numerous agencies, including the Maricopa Association of Governments, use the program to model large and small study areas. The program runs on an IBM-compatible PC, and a GIS Interface add-on is available to interface directly with ArcInfo GIS systems. The program includes a graphical user interface that is adequate, but somewhat cumbersome for entering data. The use of ASCII files for entering data is the preferred method. The area-wide traffic model was created on TRANPLAN, therefore calibration would consist of updating the existing model instead of recreating it. Based on overall compatibility, sophistication, cost, and flexibility, TRANPLAN offers the best value in meeting the City's needs.

Therefore, the TRANPLAN software package was recommended (with City concurrence) for use as the base software for development of the Sedona Traffic Model.

Existing Conditions

Street System

The backbone of the existing street system is comprised of two primary arterial roadways, SR 89A and SR 179. The local neighborhoods access these two arterials from the local street system. The street network required for the City of Sedona Traffic Model includes the two state highways and the local streets that provide primary access to the state highways. The existing street system that is included in the traffic model network and within the City Limits, is shown in Figure 2.



The TRANPLAN model network is comprised of links (street segments) and nodes (intersections of links). The program allows each link to be coded with up to four codes. The first code, Assignment Group Code, is used in the City of Sedona Traffic Model to identify street classification of the link. The second code, Link Group #1, is used to identify the lane arrangement of the link; the third code, Link Group #2, identifies the level of development along the facility; and Link Group #3 identifies the agency that owns the facility. Only a portion of these codes are used in the existing street network, however future updates and alternatives take advantage of these various descriptors.

The Network Links are grouped as follows.

Assignment Group Codes

Code #1	Local Road
Code #2	Collector Road
Code #3	Arterial Road
Code #4	Minor Highway
Code #5	Principal Highway

Link Group #1: Number of Lanes

Code #1	Centroid Connector
Code #2	Two Lane Road
Code #3	Two Lane Road with Continuous Left Turn Lane
Code #4	Four Lane Road
Code #5	Four Lane Road with Continuous Left Turn Lane
Code #6	Four Lane Divided
Code #7	Two Lane Road with On-Street Parking
Code #8	Two Lane Road with High Pedestrian Volumes
Code #9	Two Lane Road w/ On-Street Parking and High Pedestrian Volumes

Link Group #2: Area Types

Code #1	Rural
Code #2	Residential
Code #3	Low Density Commercial (Suburban)
Code #4	High Density Commercial (CBD)

Link Group #3: Agency Ownership of Road

Code #10	City of Sedona
Code #20	Yavapai County
Code #30	Coconino County
Code #40	Arizona Department of Transportation

Traffic Volumes

Existing traffic volumes throughout the city were provided by the City of Sedona. These traffic volumes were used in the calibration of the traffic model as demonstrated in the calibration runs presented in Appendix 1. The existing counts and locations follow.

Roadway	Location	ADT	Date of Count
SR 89A	URRL	12380	May 1994 (1)
SR 89A	Roadrunner Rd.	19200	Sept. 1995 (2)
SR 89A	Ver. Valley Ford	30100	Sept. 1995 (2)
SR 89A	Airport Road	23000	April 1994 (1)
SR 89A	Forest Road	16800	Sept. 1995 (2)
SR 89A	La Vista Motel	8321	July 1994 (1)
SR 179	Oak Creek Bridge	16511	July 1994 (1)
SR 179	Morgan Road	13600	May 1995 (3)
SR 179	Chapel Hill	11200	May 1995 (3)
Airport Road	near SR 89A	2199	June 1994 (1)
Andante Ave	near SR 89A	2332	May 1994 (1)
Brewer Road	Brewer School	1800	Sept. 1995 (2)
Brewer Road	near SR 89A	2378	June 1994 (1)
Chapel Road	near SR 179	1984	May 1994 (1)
Coffee Pot Road	near SR 89A	3096	June 1994 (1)
Dry Creek Road	near SR 89A	4346	June 1994 (1)
Dry Creek Road	Color Cove Road	2200	Sept. 1995 (2)
Jordan Road	near SR 89A	3097	August 1994 (1)
Meadow Lark	near SR 179	646	June 1994 (1)
Mountain Shadows	near SR 89A	1742	July 1994 (1)
Northview Ave	near SR 89A	1590	July 1994 (1)
Northview Ave	Ross Road	600	Sept. 1995 (2)
Ranger Road	near SR 179	1338	July 1994 (1)
Sanborn Road	near Coffee Pot	1863	May 1994 (1)
Sanborn Road	Rodeo Road	1500	Sept. 1995 (2)
Soldiers Pass Rd	near SR 89A	2762	June 1994 (1)
URRL	near SR 89A	2055	May 1994 (2)

Sources: (1) "Sedona Community Wide Traffic Safety Analysis" City of Sedona, Nov. 1994.
 (2) "Supplemental Traffic Counts" City of Sedona, Sept. 1995.
 (3) "SR 179 Design Concept Study" BRW, May 1995.

Traffic Operations

The TRANPLAN Model assigns trips to the roadway network on the path that offers the shortest duration of time. Therefore determination of average running speed on each link of the traffic model is an important element for the traffic assignment. The average running speeds were determined by numerous speed runs through the city. The results of the speed runs are documented in Appendix 2. Since all of the local streets had average running speeds between 20 and 30 mph, all local street links in the traffic model were assigned an average running speed of 25 mph. The principle roadways, SR 89A and SR 179, were assigned the actual average running speeds measured in the field.

Traffic Analysis Zones

Overview

An important element of any traffic model is the layout of the Traffic Analysis Zones (TAZs). A traffic analysis zone is a sub-area of the study area where the population and commercial activity contained within are considered aggregated at one point. The single point of activity is called the "centroid" of the zone, and is where all trips are assumed to be generated from and attracted to. Zone boundaries should ideally be set to include only homogeneous land uses to most accurately depict the actual traffic volumes on the roadway network. However, census tract boundaries typically dictate traffic analysis zone boundaries. Therefore, census tract boundaries were used to define the TAZs for the City of Sedona Model. However, some traffic analysis zones were further delineated to provide better accuracy where it would have a bearing on the traffic analyses.

External Zones

The External Zones are locations at the edge of the study area where trips from outside the area can enter or leave the roadway network. The Sedona Traffic Model contains four external zones:

- West of the city on SR 89A,
- East of the city on SR 89A,
- South of the Village of Oak Creek (VOC) on SR 179, and
- East of the city on Schnebly Hill Road.

Other entrance and exit points into the study area have volumes that are insignificant compared to these four primary points. The four external zone locations are shown in Figure 1.

County Zones

Much of the study area is outside the Sedona city limits . It is primarily a rural, unpopulated area, therefore large TAZs can represent the activity in these rural areas. The Village of Oak Creek has a significant amount of localized residential and commercial activity and, therefore, was assigned several TAZ's. The layout of the TAZs in the county areas of the study area is shown in Figure 1.

City Zones

The majority of the TAZs are located within the city limits of Sedona, since this is the primary source of residential and commercial activity of the study area. TAZs for residential and commercial areas were defined based on their characteristics of population and land use, which corresponds to the census tracts. The TAZs were also defined with logical access to the roadway network.

In the West Sedona Area, TAZs along SR 89A primarily contain commercial activity while residential TAZs are located further from the highway. Several small TAZs in the Uptown area contain the majority of the commercial activity, surrounded by larger residential zones. The layout of the TAZs within the city limits is depicted in Figure 3.

Trip Generation

Trip Generation estimates are developed and used to determine the number of trips to and from Traffic Analysis Zones. They are based on the types of land use present in the TAZ. The calibrated Sedona Traffic Model has updated population data and revised commercial employment information based on the 1990 Census. The trip generation equations have been modified to better replicate the travel patterns currently observed within the city. A trip type, "Tourist," has been added as a result.

Socio-Economic Data

The two types of socio-economic data used for the City of Sedona Traffic Model are population and number of employees. The trip generation rates are applied to these two quantities, and the total number of trips produced and attracted to each TAZ is calculated.

Population data was obtained from the Arizona Department of Economic Security (ADES), and included, Census block population, number of households, and boundaries. The information was used to determine the population of each TAZ and average household size in 1990. However, since the calibration year for the Sedona Traffic Model is 1994, additional population growth from 1990 to 1994 had to be added to the ADES census information.

The City of Sedona provided the number of dwelling units that have been added to each TAZ between 1990 and 1994. This number of additional dwelling units was multiplied by the average household size to determine the additional population growth, and then added to the 1990 ADES census numbers to establish the 1994 population figures.

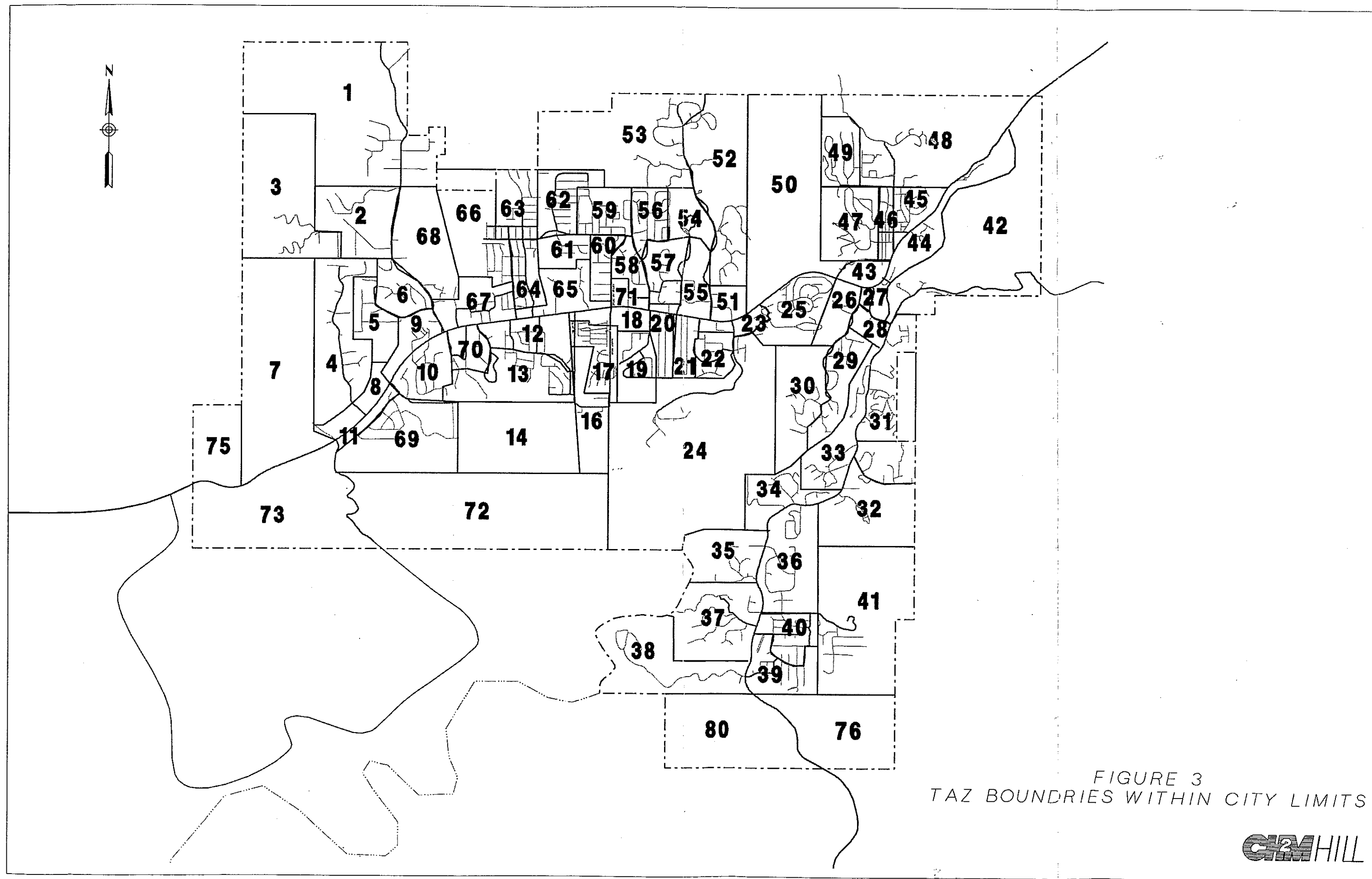


FIGURE 3
TAZ BOUNDRIES WITHIN CITY LIMITS

The employment data for each TAZ were provided by the City of Sedona. Several major employers within the city were interviewed to determine the current number of employees. A sampling of smaller employers was taken to compare with business employment averages previously utilized in conjunction with the 1990 Sedona Economic Base Study. This established an average employment figure for different types of small businesses. A total employment number for each TAZ was provided for each of seven business categories. These categories included the following:

- Construction Industry
- Manufacturing and Wholesale
- Public Utility, Government, and Community Service
- Finance, Insurance and Real Estate
- Retail and Entertainment
- Restaurant, and Lodging
- Services and Professional

The data used to determine the 1994 population figures and employment numbers provided by the City of Sedona are included in Appendix 3.

Trip Types

The area-wide traffic model included three trip types, Home Based Work (HBW), Home Based Other (HBO), and Non-Home Based (NHB). Because of the large influx of tourist activity within the City of Sedona, it has become desirable to add an additional trip type to the City of Sedona Traffic Model: "Tourist."

Trip Generation Rates

The trip generation rates were originally established for the area-wide traffic model. these rates became the foundation for re-calibration of the model. Trip generation for the area-wide traffic model was based on Residential Population, Retail Employment, Office Employment, and Special Retail Employment. The Special Retail Employment included businesses that cater to the tourist trade.

The first calibration run of the model used trip generation rates equal to the area-wide traffic model rates, however, the rates were applied to the seven employment categories now being used, and redistributed to separate the Tourist Trips. A comparison between the area-wide traffic model Trip Generation Rates and the Rates used for Calibration Run Number 1 are listed in Table 2.

The calibration process of traffic modeling involves manipulating the basic inputs to best replicate the existing traffic patterns. During this process, the Trip Generation Rates are revised to produce the number of trips required to replicate existing traffic volumes. The calibration process is documented in Appendix 1 and trip generation calculations are presented in Appendix 4. The final generation rates are documented in Table 3.

Table 2**Initial Trip Generation Rates (PB Model Rates)**

Production Rates	(PB Model Categories)	HBW Trips	HBO Trips	NHB Trips	Tourist Trips
Population	(Population)	.79 (.79)	2.42 (2.42)	0.0 (.46)	.46 (N/A)
Construction Industry	(General Employment)	0.0 (0.0)	0.0 (0.0)	2.0 (2.0)	0.0 (N/A)
Manufacturing / Wholesale	(General Employment)	0.0 (0.0)	0.0 (0.0)	2.0 (2.0)	0.0 (N/A)
Public Utility / Government	(General Employment)	0.0 (0.0)	0.0 (0.0)	2.0 (2.0)	0.0 (N/A)
Finance / Insurance / Real Estate	(General Employment)	0.0 (0.0)	0.0 (0.0)	2.0 (2.0)	0.0 (N/A)
Retail / Entertainment	(Retail Employment)	0.0 (0.0)	0.0 (0.0)	7.6 (9.6)	2.0 (N/A)
Restaurant / Lodging	(Special Retail)	0.0 (0.0)	0.0 (0.0)	2.0 (4.8)	2.8 (N/A)
Service / Professional	(Office Employment)	0.0 (0.0)	0.0 (0.0)	.80 (.80)	0.0 (N/A)

Initial Trip Generation Rates (PB Model Rates)

Attraction Rates	(PB Model Categories)	HBW Trips	HBO Trips	NHB Trips	Tourist Trips
Population	(Population)	0.0 (0.0)	.55 (.55)	0.0 (.46)	0.0 (N/A)
Construction Industry	(General Employment)	1.6 (1.6)	2.7 (2.7)	2.0 (2.0)	0.0 (N/A)
Manufacturing / Wholesale	(General Employment)	1.6 (1.6)	2.7 (2.7)	2.0 (2.0)	.46 (N/A)
Public Utility / Government	(General Employment)	1.6 (1.6)	2.7 (2.7)	2.0 (2.0)	.46 (N/A)
Finance / Insurance / Real Estate	(General Employment)	1.6 (1.6)	2.7 (2.7)	2.0 (2.0)	2.0 (N/A)
Retail / Entertainment	(Retail Employment)	1.8 (1.8)	8.3 (13.9)	7.6 (9.6)	7.6 (N/A)
Restaurant / Lodging	(Special Retail)	.90 (.90)	7.0 (7.0)	2.0 (4.8)	2.8 (N/A)
Service / Professional	(Office Employment)	1.6 (1.6)	1.4 (1.4)	.80 (.80)	.46 (N/A)

Table 3

Final Trip Generation Rates

Production Rates	HBW Trips	HBO Trips	NHB Trips	Tourist Trips
Population	1.33	3.00	0.00	0.00
Construction Industry	0.00	0.00	1.50	0.00
Manufacturing / Wholesale	0.00	0.00	1.50	0.00
Public Utility / Government	0.00	0.00	1.50	0.00
Finance / Insurance / Real Estate	0.00	0.00	1.50	0.00
Retail / Entertainment	0.00	0.00	5.00	2.00
Restaurant / Lodging	0.00	0.00	2.00	5.50
Service / Professional	0.00	0.00	0.80	0.00

Final Trip Generation Rates

Attraction Rates	HBW Trips	HBO Trips	NHB Trips	Tourist Trips
Population	0.00	0.60	0.00	0.00
Construction Industry	1.80	2.40	2.00	0.00
Manufacturing / Wholesale	1.80	2.40	2.00	0.00
Public Utility / Government	2.00	2.40	2.00	0.00
Finance / Insurance / Real Estate	1.90	2.40	2.00	2.00
Retail / Entertainment	1.90	7.50	5.00	7.00
Restaurant / Lodging	1.60	6.30	2.00	2.80
Service / Professional	2.00	1.20	0.80	0.00

Trip Distribution

The purpose of Trip Distribution is to distribute the trips calculated in Trip Generation between the various Traffic Analysis Zones. The Gravity Model was used to calculate how trips are distributed between the TAZs. The Gravity model parallels Newton's law of Gravity in that it is based on the assumption that trips produced in a TAZ are attracted to other TAZs in direct proportion to the magnitude of attractions, and in inversely proportional to the travel time between the zones. Using this approach, a trip table is produced for each TAZ displaying the number of trips distributed to each of the other TAZs in the model. The final set of trip tables for the re-calibrated Sedona Traffic Model are provided in Appendix 5.

Person Trip Adjustments

As part of the trip generation calculations, person-trips are produced and attracted to each TAZ. A vehicle can contain numerous persons, therefore, completing several person-trips. Since most trips made in the Sedona area are completed in a motor vehicle, this becomes a significant factor in the model. The method used to convert person-trips to vehicle-trips is to apply an occupancy rate to each of the trip types. The occupancy rates used for the Sedona Traffic Model are as follows:

- Home Based Work Trip Occupancy 1.05 persons per vehicle
- Home Based Other Trip Occupancy 1.25 persons per vehicle
- Non-Home Based Trip Occupancy 1.25 persons per vehicle
- Tourist Trip Occupancy 2.20 persons per vehicle

Through Trips

The gravity model typically does not distribute trips between external zones very well because there typically is a large travel time between these zones. The through trips are entered into the trip tables following the calculations of the gravity model. The through trip volumes used in the initial calibration runs is based on a *best guess*. The results of the Origin-Destination Study being conducted by the City of Sedona will provide more accurate numbers. .

Internal Trip Adjustments

While the Traffic Analysis Zones were delineated as homogeneously as can be expected, several of the zones still contain a mixture of residential and commercial land uses. TAZs with mixed land use may have a number of internal trips (trips traveling within the TAZ, and never being seen on the network). The TRANPLAN Model allows the incorporation of Intra-Zonal time penalties. These penalties create a situation where an internal trip will require more travel time than traveling to another nearby zone. In this situation, the gravity model will tend to assign more inter-zonal trips than without the penalty. During the calibration of the Sedona Traffic Model, Intra-Zonal penalties were assigned to zones that

distributed more than ten percent of it's total trips internally. A total of 19 TAZs within the study area contain Intra-Zonal penalties.

Trip Assignment

The purpose of Trip Assignment is to load each trip distributed by the Gravity Model onto the network and report the total daily trips that occur on each link. The TRANPLAN model assigns each trip to the network based on a path that provides the minimum travel time between the TAZs. The results of the modeled daily traffic volumes (as compared with the existing traffic counts) is documented for each calibration run and presented in Appendix 1. The traffic volumes calculated by the re-calibrated traffic model within the City of Sedona are shown in Figure 4. The traffic volumes calculated in the study area outside the city limits are displayed in Figure 5.

Model Validation

The calibration of the highway assignment model includes identifying the model specifications and adjusting the equations to adequately represent the region. The validation of the model consists of checking the accuracy of any link data assumptions and evaluating the reasonableness of the input data by comparing the model estimated assignments to traffic counts.

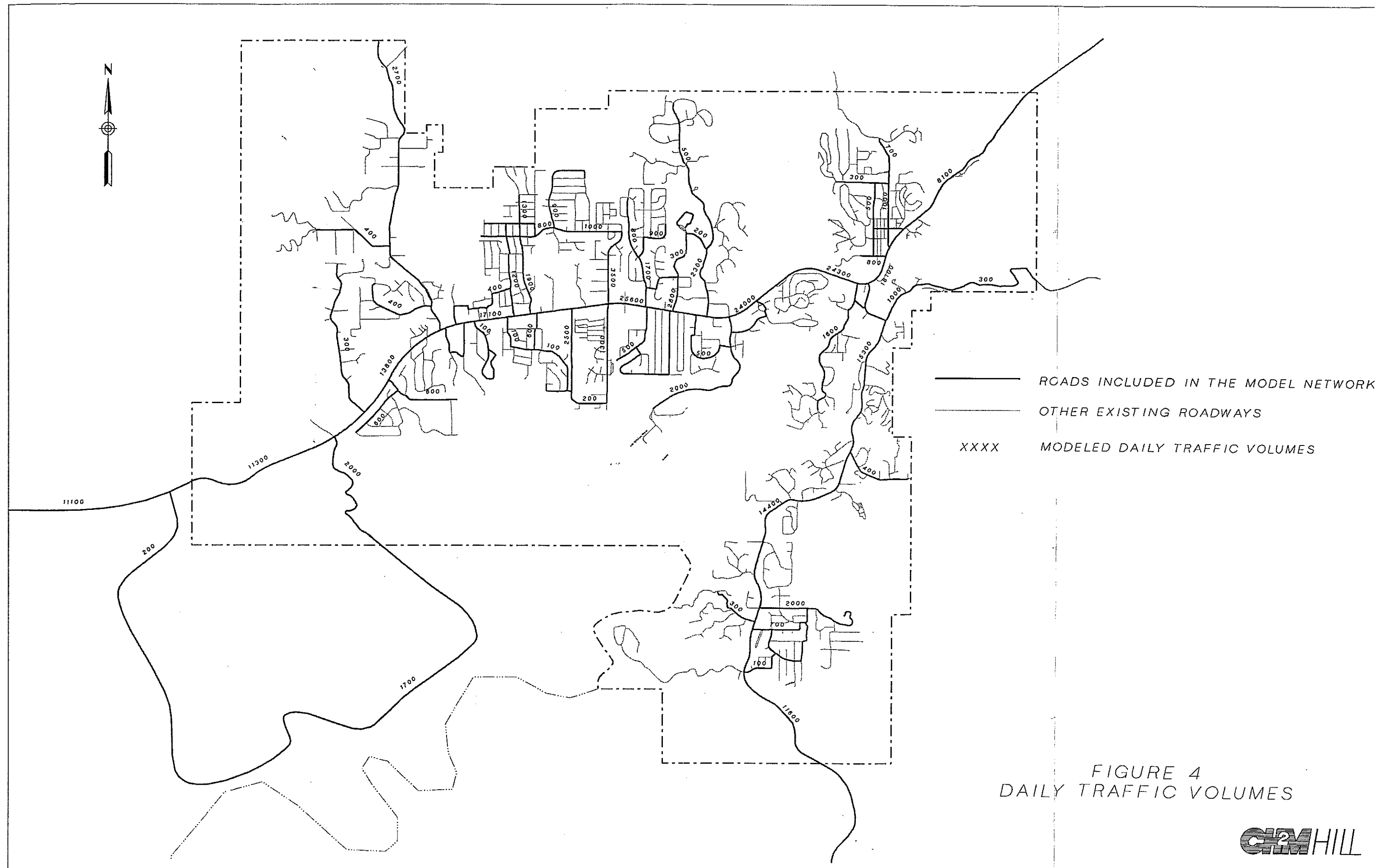
When using the percent error method to validate the model, the following guidelines are suggested.

Functional Classification	Percent Error
Freeways	Less than 7 Percent
Principal Arterials	Less than 10 Percent
Minor Arterials	Less than 15 Percent
Collectors	Less than 25 Percent
Frontage Roads	Less than 25 Percent

Source: FHWA Calibration and Adjustment of System Planning Models; December 1990

For comparison with these guidelines, the roadway network used for the Sedona Traffic Model contains two functional classifications. SR 89A and SR 179 are Principal Arterials, and all other roadways are considered Collectors or Local Streets.

Table 4, titled "Network Loading Results", documents the locations where existing counts are available, and compares those to the modeled volumes at each location.



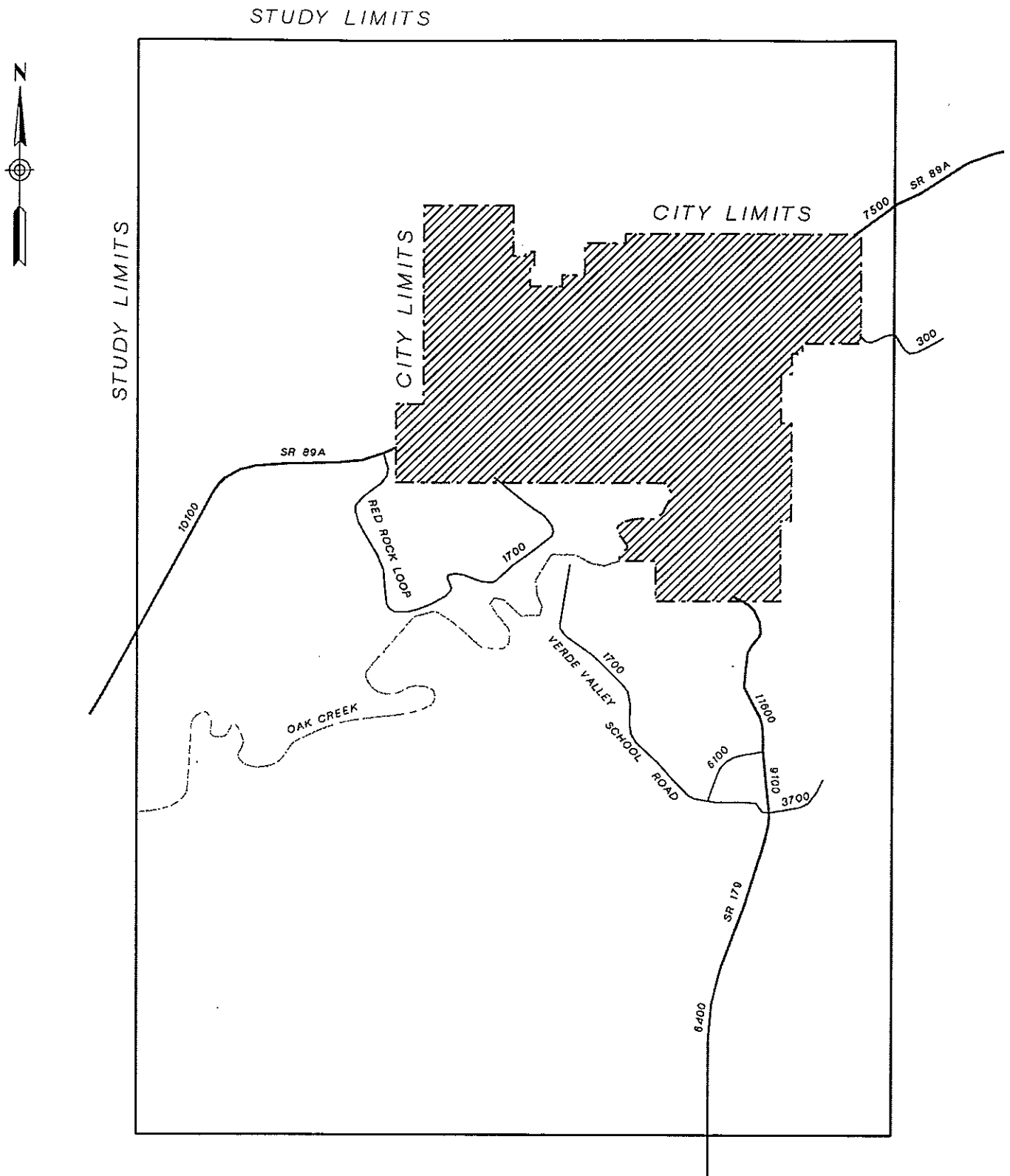


FIGURE 5
DAILY TRAFFIC VOLUMES

Principal Arterials

- SR 179 - Generally the model is predicting higher volumes than what was counted in the field. The average percent error for the three links along SR 179 is +10%; this is equal to the high end of the acceptable guidelines.
- SR 89A - The model is predicting the same travel patterns along SR 89A as documented by the field counts. Volumes continuously rise as one travels from the west end of town to a peak between Coffee Pot Road and Soldiers Pass Road. Volumes decline slowly as one travels towards the "Y" intersection and then fall dramatically after leaving the Uptown area. The average percent error for the 6 links along SR 89A is -4%, this is well within the accepted guidelines.

Collectors and Local Streets

Generally the Collector and Local Streets are within the $\pm 25\%$ guidelines, except for some isolated locations as described below.

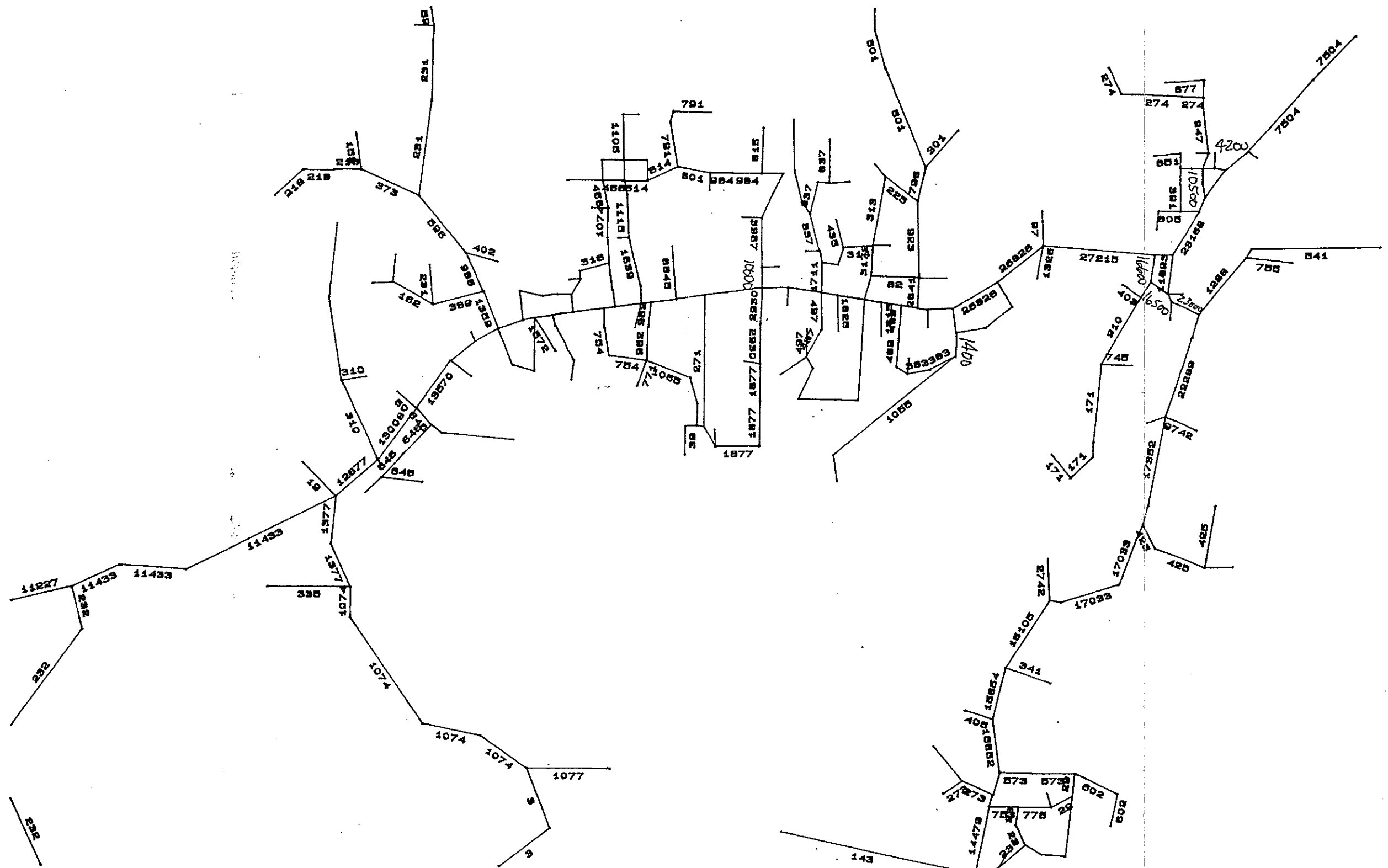
- Apple Avenue - The Centroid connector of Traffic Analysis Zone (TAZ) 45 that includes most of the commercial areas of Uptown is located on Apple Avenue. This was done so the model could distribute trips from TAZ 45 to either Jordan Road or SR 89A to better replicate the travel patterns in the Uptown area. However this means that volumes on Apple Ave are extremely high compared to the existing traffic counts.
- Brewer Road and Ranger Road - These two roadways currently offer an alternative route to the "Y" intersection. Current traffic counts seem to indicate that some drivers are using this bypass today, however the model assigns traffic based on the shortest time to get from the origin to the destination. Using Ranger and Brewer Roads is not perceived as the shortest route for any of the trips that use the "Y" intersection as predicted by the model. Therefore predicted volumes on these streets are much lower than existing counts.
- Northview Road - Two count locations are used to validate traffic along Northview Road, one at SR 89A and the other at Ross Road. The model is assigning traffic on Northview Road from the residential areas along the road. Comparing the count taken at Ross Road with the modeled volumes shows the calibration is within the accepted guidelines, however, the existing traffic count at SR89A includes traffic from the commercial areas along the highway and is much higher than the count at Ross Road. The layout of the TAZs along SR 89A places these commercial trips directly onto SR 89A and not onto Northview Road, therefore there is no increase in the modeled volumes. The predicted volume on Northview near SR89 is much lower than the existing counts because these commercial trips are not loaded onto Northview Road.

- Sanborn Road - The model appears to be producing the correct amount of traffic from the residential areas along Sanborn Road because validation along Coffee Pot and Andante Roads is within the accepted guidelines. However, the volume predicted along Sanborn Road near Rodeo Road is low compared to the existing counts. The model appears to be assigning trips to the nearest street that will take the trips out to SR 89A, therefore trips near Coffee Pot Road use Coffee Pot Road instead of traveling down to Andante, and vice versa. However, from the traffic count data, more traffic is being observed in the center section of Sanborn Road than the model is predicting. Travelers choose which North-South roadway they will use based on other criteria such as pavement condition and overall driver comfort. Such factors affect the drivers' actual speed, and thus the decision to go beyond the (apparent) shortest distance.

The calibration of the Sedona Traffic Model is complete based on the information presented in this document. Further refinement may be appropriate as a result of the data obtained from the Origin-Destination Study, and will be updated at that time.

City of Sedona Transportation Model						
Network Loading Results						
			Run #	1		
			Date:	8/24/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
URRL	1578	2023	2050	1377	-673	-33%
SR89A	1578	1562	12400	12677	277	2%
Dry Creek	1348	1415	4350	1359	-2991	-69%
Andante	1329	1372	2300	1639	-661	-29%
Coffee Pot	1300	1336	3100	10000	6900	223%
Sunset	1400	1336	4500	2930	-1570	-35%
Mount. Shadows	1283	1345	1700	1711	11	1%
Northview	1412	1345	1600	497	-1103	-69%
Soldiers Pass	1316	1376	2800	2841	41	1%
Airport	1421	1378	2200	1400	-800	-36%
SR89A	1378	1323	23000	25826	2826	12%
Brewer Road	1322	1268	2400	16600	14200	592%
Ranger Road	1344	1322	1300	16500	15200	1169%
Jordan Road	1216	1196	3100	10500	7400	239%
Apple Ave	1159	1150	1060	4200	3140	296%
SR89A	1112	1034	8300	7504	-796	-10%
SR179	1367	1385	16500	23000	6500	39%
SR179	1581	1518	13600	17352	3752	28%
SR179	1647	1675	11200	14479	3279	29%
Chapel Hill	1626	1625	2000	573	-1427	-71%
Meadow Lark	1648	1647	650	753	103	16%
Sanborn			1860	984	-876	-47%
Residential Links			23210	13223	-9987	-43%
Commercial Links			10060	27541	17481	174%
State Highways			85000	100838	15838	19%

SEDONA AREA TRANSPORTATION MODEL
1985 LOADING
CHEM HILL INC
24AUG85 14:14:43



RUN NUMBER 1

TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: August 24, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #2

Network Changes

- Change speed on Brewer Road and Ranger Road to 20 MPH to discourage SR179 traffic from using the bypass.

Minimum Path Changes

- None

Trip Generation Changes

- Increase the productions from the residential type zones by 30% because volumes from these areas is consistently low. HB Work Productions = 1.0; HB Other Productions = 3.0
- Revise the handling of Tourist trips, productions from lodging areas and external zones only, (assume the tourist trips from rentals in housing areas is included with HB Other trips). Tourist Productions from Households = 0, Tourist Productions from Lodging = 5.5 per employee.
- Since the State Highways generally have excess traffic, reduce the attractions of HB Other trips by 10% in all categories, except households which will be increased to increase trips on the residential type links. Codes 1-4 = 2.4, Code 5 = 7.5, Code 6 = 6.3, Code 7 = 1.2, Code 8 = 0.6

Trip Distribution Changes

- Increase Vehicle Occupancy Rates from 1.10 to 1.20, because of the large numbers of tourists who tend to travel in groups.

City of Sedona Transportation Model						
Network Loading Results						
			Run #	2		
			Date:	8/24/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
URRL	1578	2023	2050	1347	-703	-34%
SR89A	1578	1562	12400	10171	-2229	-18%
Dry Creek	1348	1415	4350	1358	-2992	-69%
Andante	1329	1372	2300	1636	-664	-29%
Coffee Pot	1300	1336	3100	9300	6200	200%
Sunset	1400	1336	4500	2898	-1602	-36%
Mount. Shadows	1283	1345	1700	1744	44	3%
Northview	1412	1345	1600	532	-1068	-67%
Soldiers Pass	1316	1376	2800	2671	-129	-5%
Airport	1421	1378	2200	1400	-800	-36%
SR89A	1378	1323	23000	24748	1748	8%
Brewer Road	1322	1268	2400	680	-1720	-72%
Ranger Road	1344	1322	1300	600	-700	-54%
Jordan Road	1216	1196	3100	9000	5900	190%
Apple Ave	1159	1150	1060	3500	2440	230%
SR89A	1112	1034	8300	6163	-2137	-26%
SR179	1367	1385	16500	22600	6100	37%
SR179	1581	1518	13600	16248	2648	19%
SR179	1647	1675	11200	13239	2039	18%
Chapel Hill	1626	1625	2000	580	-1420	-71%
Meadow Lark	1648	1647	650	738	88	14%
Sanborn			1860	1000	-860	-46%
Residential Links			23210	13233	-9977	-43%
Commercial Links			10060	24471	14411	143%
State Highways			85000	93169	8169	10%

[illegible]

RUN NUMBER 2

MEMORANDUM

CH2M HILL

TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: August 24, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #3

Network Changes

- None

Minimum Path Changes

- Remove Intra-zonal penalty in zones 45 and 46 to reduce the trips on Jordon and Apple Roads.
- Increase the Intra-zonal penalty to be greater than the average trip length in zones 87, 88, and 89 to reduce the internal trips

Trip Generation Changes

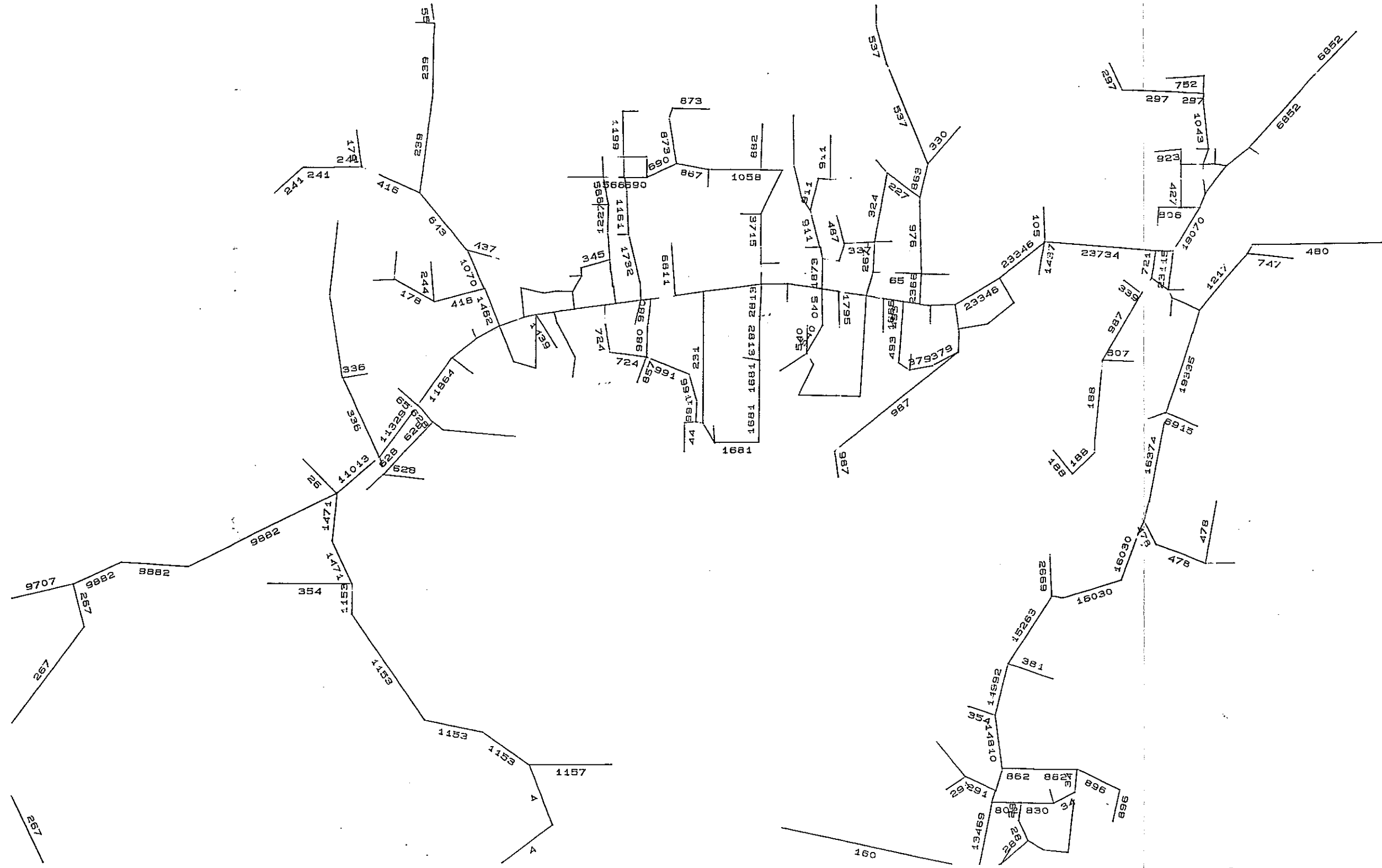
- Increase Home Based Work productions and Attractions to increase travel on the residential type links. HB Work Productions = 1.25
- Eliminate Tourist Trip Attractions to Manufacturing, Wholesale, and Service employment's.
- Reduce generation rates for Non-HB trip types to reduce extra traffic around commercial zones
- Revise External trip generation to reflect people trips instead of vehicles.
- Add Tourist Attractions to Zone 41 to account for the Chapel of The Holy Cross.

Trip Distribution Changes

- Use different utilization rates for the various trip types; HB-Work = 1.05, HB-Other and NHB = 1.25, Tourist = 2.2, and External = 1.25

City of Sedona Transportation Model						
Network Loading Results						
			Run #	3		
			Date:	8/25/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
URRL	1578	2023	2050	1471	-579	-28%
SR89A	1578	1562	12400	11013	-1387	-11%
Dry Creek	1348	1415	4350	1462	-2888	-66%
Andante	1329	1372	2300	1732	-568	-25%
Coffee Pot	1300	1336	3100	7900	4800	155%
Sunset	1400	1336	4500	2813	-1687	-37%
Mount. Shadows	1283	1345	1700	1873	173	10%
Northview	1412	1345	1600	540	-1060	-66%
Soldiers Pass	1316	1376	2800	2366	-434	-16%
Airport	1421	1378	2200	1300	-900	-41%
SR89A	1378	1323	23000	24748	1748	8%
Brewer Road	1322	1268	2400	680	-1720	-72%
Ranger Road	1344	1322	1300	600	-700	-54%
Jordan Road	1216	1196	3100	7400	4300	139%
Apple Ave	1159	1150	1060	2700	1640	155%
SR89A	1112	1034	8300	6163	-2137	-26%
SR179	1367	1385	16500	19900	3400	21%
SR179	1581	1518	13600	16374	2774	20%
SR179	1647	1675	11200	13469	2269	20%
Chapel Hill	1626	1625	2000	862	-1138	-57%
Meadow Lark	1648	1647	650	802	152	23%
Sanborn			1860	1058	-802	-43%
Residential Links			23210	13913	-9297	-40%
Commercial Links			10060	20366	10306	102%
State Highways			85000	91667	6667	8%

SEDONA AREA TRANSPORTATION MODEL
1995 LOADING
CHEM HILL INC
25AUG95 11:17:46



RUN NUMBER 3

MEMORANDUM

CH2M HILL

TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: August 25, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #4

Network Changes

- Change Centroid orientation of TAZ 18 to send traffic to Sunset Road instead of SR89A.
- Change running speed on Shelby from 20 MPH to 25 MPH.

Minimum Path Changes

- Remove Intra-Zonal penalty on zones 28, 31, 34, 77, and 84 to reduce overall traffic along SR179.

Trip Generation Changes

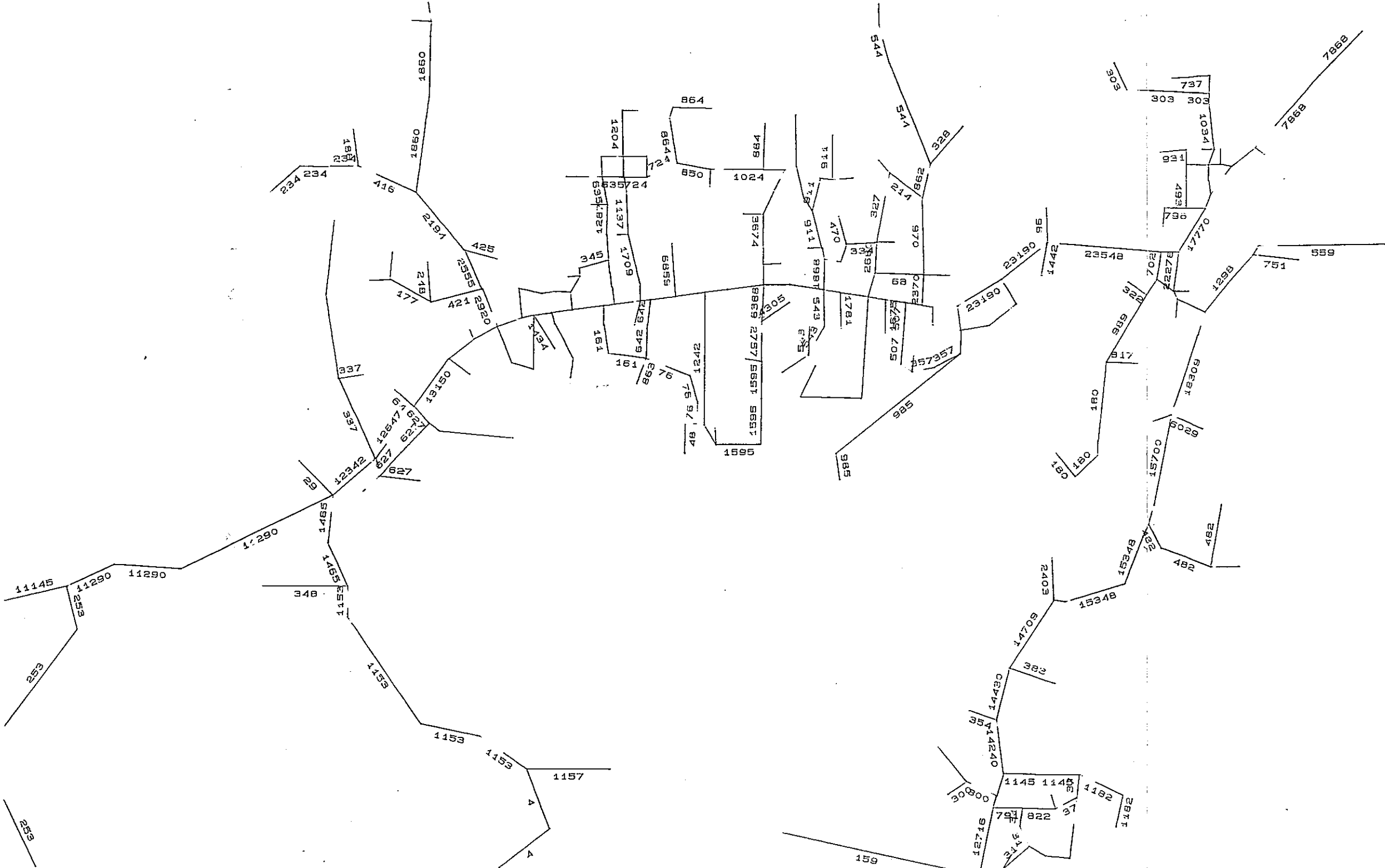
- Add Lodging Employment to TAZ 15 to increase traffic on Dry Creek Road, Emp=150
- Reduce Retail Employment values for TAZ 46 and 45 in half.

Trip Distribution Changes

- None

City of Sedona Transportation Model						
Network Loading Results						
			Run #	4		
			Date:	8/25/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
URRL	1578	2023	2050	1465	-585	-29%
SR89A	1578	1562	12400	12342	-58	0%
Dry Creek	1348	1415	4350	2920	-1430	-33%
Andante	1329	1372	2300	1709	-591	-26%
Coffee Pot	1300	1336	3100	7800	4700	152%
Sunset	1400	1336	4500	6388	1888	42%
Mount. Shadows	1283	1345	1700	1868	168	10%
Northview	1412	1345	1600	543	-1057	-66%
Soldiers Pass	1316	1376	2800	2370	-430	-15%
Airport	1421	1378	2200	1300	-900	-41%
SR89A	1378	1323	23000	23190	190	1%
Brewer Road	1322	1268	2400	702	-1698	-71%
Ranger Road	1344	1322	1300	600	-700	-54%
Jordan Road	1216	1196	3100	4800	1700	55%
Apple Ave	1159	1150	1060	2200	1140	108%
SR89A	1112	1034	8300	7868	-432	-5%
SR179	1367	1385	16500	19000	2500	15%
SR179	1581	1518	13600	15700	2100	15%
SR179	1647	1675	11200	12716	1516	14%
Chapel Hill	1626	1625	2000	1145	-855	-43%
Meadow Lark	1648	1647	650	791	141	22%
Sanborn			1860	1024	-836	-45%
Residential Links			23210	19153	-4057	-17%
Commercial Links			10060	17170	7110	71%
State Highways			85000	90816	5816	7%

25 AUG 95 14: 33: 25



RUN NUMBER 4

MEMORANDUM

CH2M HILL

TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: August 25, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #5

Network Changes

- Change Centroid orientation of TAZ 71 to send traffic to SR89A instead of Coffee Pot Road.
- Change running speed on Shelby from 25 MPH to 28 MPH.

Minimum Path Changes

- None.

Trip Generation Changes

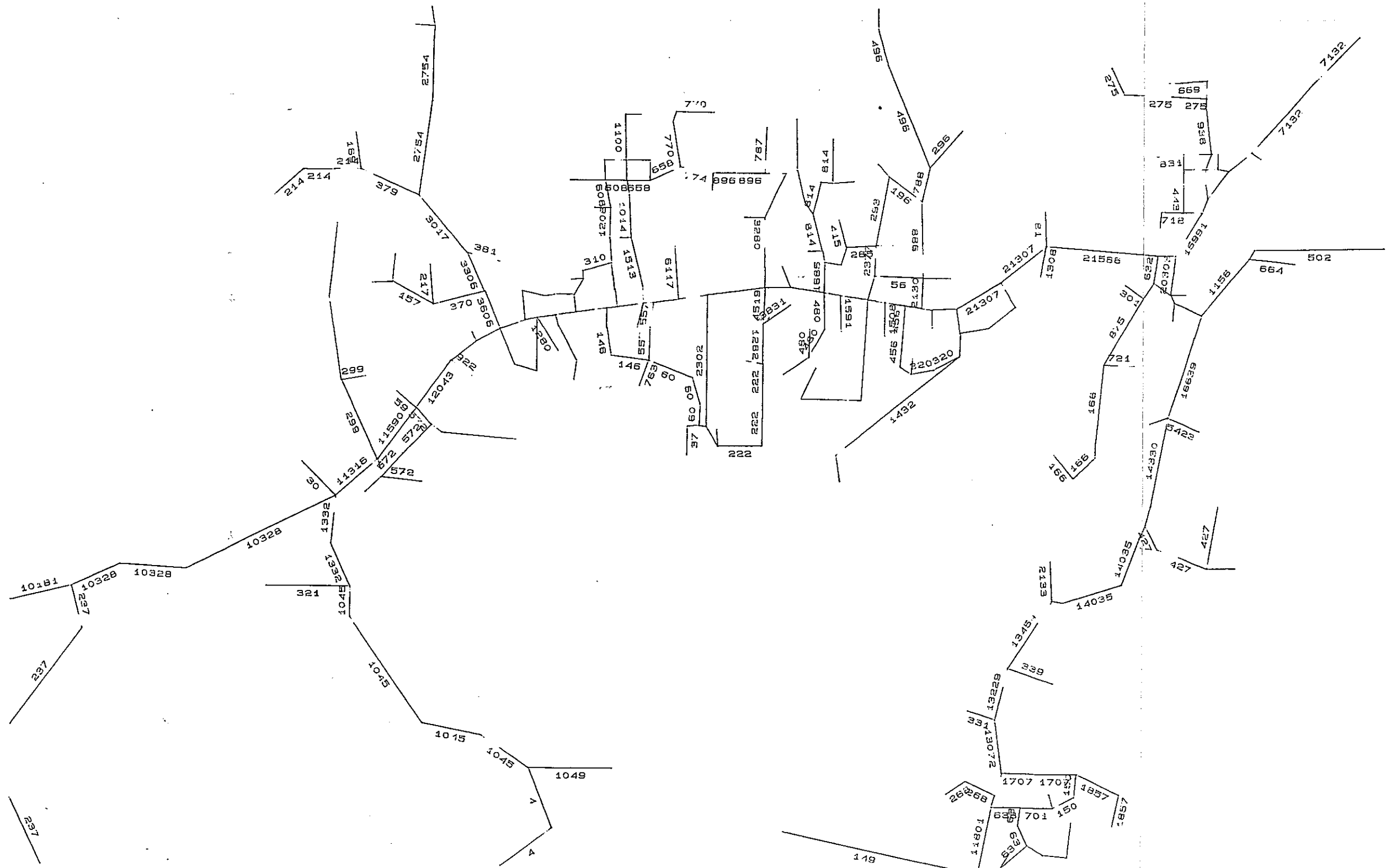
- Change Retail/Entertainment Employment in TAZ 15 to 100, accounting for the high recreational attraction to the areas north of Sedona.
- Change Retail/Entertainment Employment in TAZ 41 to 100, accounting for the high tourist attraction to the Chapel of the Holy Cross. Remove tourist attractions added for Run #3.
- Move all of the Airport Employment into Retail/Entertainment category to increase attractions.

Trip Distribution Changes

- None

City of Sedona Transportation Model						
Network Loading Results						
			Run #	5		
			Date:	8/28/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
URRL	1578	2023	2050	1332	-718	-35%
SR89A	1578	1562	12400	11316	-1084	-9%
Dry Creek	1348	1415	4350	3606	-744	-17%
Andante	1329	1372	2300	1513	-787	-34%
Coffee Pot	1300	1336	3100	3300	200	6%
Sunset	1400	1336	4500	4519	19	0%
Mount. Shadows	1283	1345	1700	1685	-15	-1%
Northview	1412	1345	1600	480	-1120	-70%
Soldiers Pass	1316	1376	2800	2130	-670	-24%
Airport	1421	1378	2200	1700	-500	-23%
SR89A	1378	1323	23000	21307	-1693	-7%
Brewer Road	1322	1268	2400	632	-1768	-74%
Ranger Road	1344	1322	1300	500	-800	-62%
Jordan Road	1216	1196	3100	4300	1200	39%
Apple Ave	1159	1150	1060	1900	840	79%
SR89A	1112	1034	8300	7132	-1168	-14%
SR179	1367	1385	16500	17200	700	4%
SR179	1581	1518	13600	14330	730	5%
SR179	1647	1675	11200	11801	601	5%
Chapel Hill	1626	1625	2000	1707	-293	-15%
Meadow Lark	1648	1647	650	633	-17	-3%
Sanborn			1860	896	-964	-52%
Residential Links			23210	18071	-5139	-22%
Commercial Links			10060	11630	1570	16%
State Highways			85000	83086	-1914	-2%

SEDONA AREA TRANSPORTATION MODEL
1995 LOADING
CH2M HILL, INC
28AUG95 13:18:30



RUN NUMBER 5

MEMORANDUM

CH2M HILL

TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: August 28, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #6

Network Changes

- None

Minimum Path Changes

- None.

Trip Generation Changes

- Add new generation category for special generators (Code #9), return employment numbers back to original data, add special generator trips to TAZ 15, 24, and 41.

Trip Distribution Changes

- None

City of Sedona Transportation Model						
Network Loading Results						
			Run #	6		
			Date:	8/28/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
URRL	1578	2023	2050	1331	-719	-35%
SR89A	1578	1562	12400	10841	-1559	-13%
Dry Creek	1348	1415	4350	3842	-508	-12%
Andante	1329	1372	2300	1526	-774	-34%
Coffee Pot	1300	1336	3100	3300	200	6%
Sunset	1400	1336	4500	4563	63	1%
Mount. Shadows	1283	1345	1700	1699	-1	0%
Northview	1412	1345	1600	490	-1110	-69%
Soldiers Pass	1316	1376	2800	2150	-650	-23%
Airport	1421	1378	2200	2500	300	14%
SR89A	1378	1323	23000	21733	-1267	-6%
Brewer Road	1322	1268	2400	660	-1740	-73%
Ranger Road	1344	1322	1300	500	-800	-62%
Jordan Road	1216	1196	3100	4400	1300	42%
Apple Ave	1159	1150	1060	2000	940	89%
SR89A	1112	1034	8300	7185	-1115	-13%
SR179	1367	1385	16500	17400	900	5%
SR179	1581	1518	13600	14502	902	7%
SR179	1647	1675	11200	11366	166	1%
Chapel Hill	1626	1625	2000	1793	-207	-10%
Meadow Lark	1648	1647	650	673	23	4%
Sanborn			1860	912	-948	-51%
Residential Links			23210	19329	-3881	-17%
Commercial Links			10060	11850	1790	18%
State Highways			85000	83027	-1973	-2%

MEMORANDUM

CH2M HILL

TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: August 29, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #7

Network Changes

- None

Minimum Path Changes

- Add Intra-Zonal penalty to TAZ 15

Trip Generation Changes

- None

Trip Distribution Changes

- Change EX-EX trips vehicle utilization rate from 1.20 to 1.10

City of Sedona Transportation Model						
Network Loading Results						
			Run #	7		
			Date:	8/29/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
URRL	1578	2023	2050	1327	-723	-35%
SR89A	1578	1562	12400	11547	-853	-7%
Dry Creek	1348	1415	4350	5163	813	19%
Andante	1329	1372	2300	1518	-782	-34%
Coffee Pot	1300	1336	3100	3300	200	6%
Sunset	1400	1336	4500	4577	77	2%
Mount. Shadows	1283	1345	1700	1686	-14	-1%
Northview	1412	1345	1600	471	-1129	-71%
Soldiers Pass	1316	1376	2800	2165	-635	-23%
Airport	1421	1378	2200	2500	300	14%
SR89A	1378	1323	23000	22570	-430	-2%
Brewer Road	1322	1268	2400	666	-1734	-72%
Ranger Road	1344	1322	1300	500	-800	-62%
Jordan Road	1216	1196	3100	4400	1300	42%
Apple Ave	1159	1150	1060	2000	940	89%
SR89A	1112	1034	8300	7772	-528	-6%
SR179	1367	1385	16500	17900	1400	8%
SR179	1581	1518	13600	15029	1429	11%
SR179	1647	1675	11200	11875	675	6%
Chapel Hill	1626	1625	2000	1797	-203	-10%
Meadow Lark	1648	1647	650	669	19	3%
Sanborn			1860	904	-956	-51%
Residential Links			23210	20612	-2598	-11%
Commercial Links			10060	11865	1805	18%
State Highways			85000	86693	1693	2%

City of Sedona Transportation Model						
Network Loading Results						
			Run #	7 (Modified)		
			Date:	10/2/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
Airport	1421	1378	2200	2500	300	14%
Andante	1329	1372	2300	1518	-782	-34%
Apple Ave	1159	1150	1060	2000	940	89%
Brewer @ Brewer School	1463	1357	1800	900	-900	-50%
Brewer Road @ 89A	1322	1268	2400	666	-1734	-72%
Chapel Hill	1626	1625	2000	1797	-203	-10%
Coffee Pot	1300	1336	3100	3300	200	6%
Dry Creek @ 89A	1348	1415	4350	5163	813	19%
Dry Creek @ Color Cove	1218	1056	2200	4300	2100	95%
Jordan Road	1216	1196	3100	4400	1300	42%
Meadow Lark	1648	1647	650	669	19	3%
Mount. Shadows	1283	1345	1700	1686	-14	-1%
Northview @ 89A	1412	1345	1600	500	-1100	-69%
Northview @ Ross	1449	1412	600	500	-100	-17%
Ranger Road	1344	1322	1300	500	-800	-62%
Sanborn @ Coffee Pot	1175	1178	1860	1500	-360	-19%
Sanborn @ Rodeo	1157	1176	1500	800	-700	-47%
Soldiers Pass	1316	1376	2800	2165	-635	-23%
SR179	1367	1385	16500	17900	1400	8%
SR179	1581	1518	13600	15029	1429	11%
SR179	1647	1675	11200	11875	675	6%
SR89A @ Airport	1378	1323	23000	22570	-430	-2%
SR89A @ Forest Rd	1269	1234	16800	17000	200	1%
SR89A @ La Vista	1112	1034	8300	7772	-528	-6%
SR89A @ Roadrunner	1394	1393	19200	16600	-2600	-14%
SR89A @ URRL	1578	1562	12400	11547	-853	-7%
SR89A @ Verde Valley Ford	1332	1345	30100	23900	-6200	-21%
Sunset	1400	1336	4500	4577	77	2%
URRL	1578	2023	2050	1327	-723	-35%
Residential Links			41110	38667	-2443	-6%
Commercial Links			10060	11865	1805	18%
State Highways			151100	144193	-6907	-5%

MEMORANDUM

CHM HILL

TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: October 4, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #8

Network Changes

- Added additional traffic counts provided by the City of Sedona.

Minimum Path Changes

- None

Trip Generation Changes

- Based on a new traffic count provided on Dry Creek Road at Color Cove, the traffic generated from TAZ 15 is very high, the assumed employment in TAZ 15 is reduced to 100 employees, and the special generator rate is reduced to 2000 veh
- Traffic counts were taken at locations that traffic is generated by residential areas only, the trip generation of these areas is still a little low. HB-Other rates for households is increased to 1.33, and to compensate for the increased trips Non-HB trip rates for categories 1-4 were reduced to 1.5.

Trip Distribution Changes

- Change EX-EX trips to be entered directly in to the trip matrix. (no longer modeled).

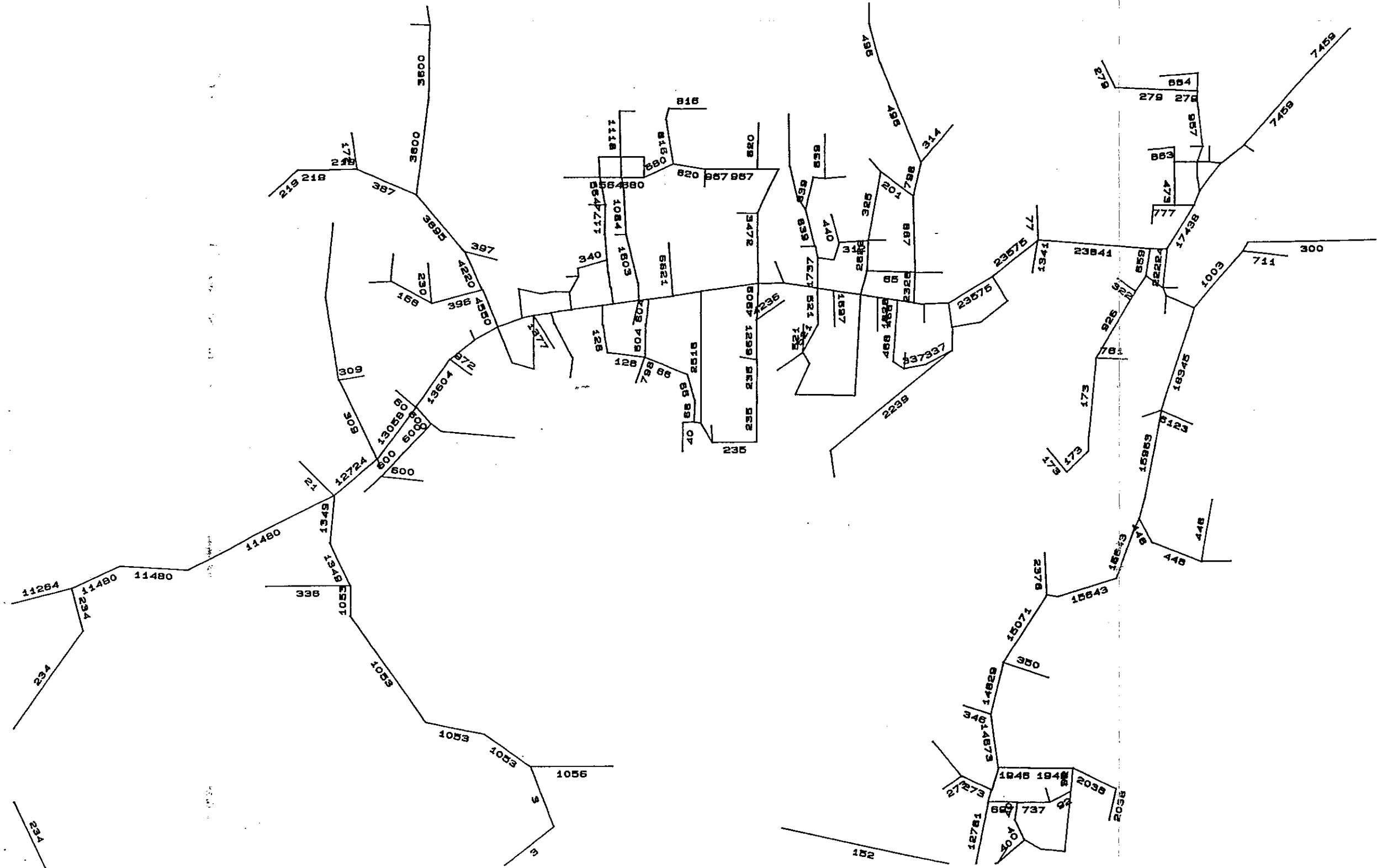
City of Sedona Transportation Model						
Network Loading Results						
			Run #	8		
			Date:	10/4/95		
Road	Link#1	Link#2	Exist. Vol.	Load Vol	Difference	% Diff.
Airport	1421	1378	2200	2500	300	14%
Andante	1329	1372	2300	1600	-700	-30%
Apple Ave	1159	1150	1060	2000	940	89%
Brewer @ Brewer School	1463	1357	1800	1200	-600	-33%
Brewer Road @ 89A	1322	1268	2400	700	-1700	-71%
Chapel Hill	1626	1625	2000	1900	-100	-5%
Coffee Pot	1300	1336	3100	3500	400	13%
Dry Creek @ 89A	1348	1415	4350	4600	250	6%
Dry Creek @ Color Cove	1218	1056	2200	3600	1400	64%
Jordan Road	1154	1116	3100	3500	400	13%
Meadow Lark	1648	1647	650	700	50	8%
Mount. Shadows	1283	1345	1700	1700	0	0%
Northview @ 89A	1412	1345	1600	500	-1100	-69%
Northview @ Ross	1449	1412	600	500	-100	-17%
Ranger Road	1344	1322	1300	600	-700	-54%
Sanborn @ Coffee Pot	1175	1178	1860	1600	-260	-14%
Sanborn @ Rodeo	1157	1176	1500	800	-700	-47%
Soldiers Pass	1316	1376	2800	2300	-500	-18%
SR179	1367	1385	16500	18900	2400	15%
SR179	1581	1518	13600	16000	2400	18%
SR179	1647	1676	11200	12800	1600	14%
SR89A @ Airport	1378	1323	23000	23600	600	3%
SR89A @ Forest Rd	1269	1234	16800	17400	600	4%
SR89A @ La Vista	1112	1034	8300	7500	-800	-10%
SR89A @ Roadrunner	1394	1393	19200	17400	-1800	-9%
SR89A @ URRL	1578	1562	12400	12700	300	2%
SR89A @ Verde Valley Ford	1332	1345	30100	25100	-5000	-17%
Sunset	1400	1336	4500	4900	400	9%
URRL	1578	2023	2050	1300	-750	-37%
Residential Links			38910	36500	-2410	-6%
Commercial Links			12260	13800	1540	13%
State Highways			151100	151400	300	0%

040CT95 11:57:02

1998 LOADING

CHAM HILL INC

CHAM HILL INC

**RUN NUMBER 8**

MEMORANDUM



TO: Sedona Modeling File
FROM: Mike Kies P.E.
DATE: October 6, 1995
SUBJECT: Traffic Model Calibration
PROJECT: 117990.03

Run #9

Network Changes

- None

Minimum Path Changes

- None

Trip Generation Changes

- Special Generator values were refined to nearly replicate the existing volume counts.

TAZ 15, Dry Creek Recreation Area = 1100 trips

TAZ 24, Airport = 1200 trips

TAZ 29, Ranger Station = 700 trips

TAZ 40, Chapel of the Holy Cross = 2000 trips

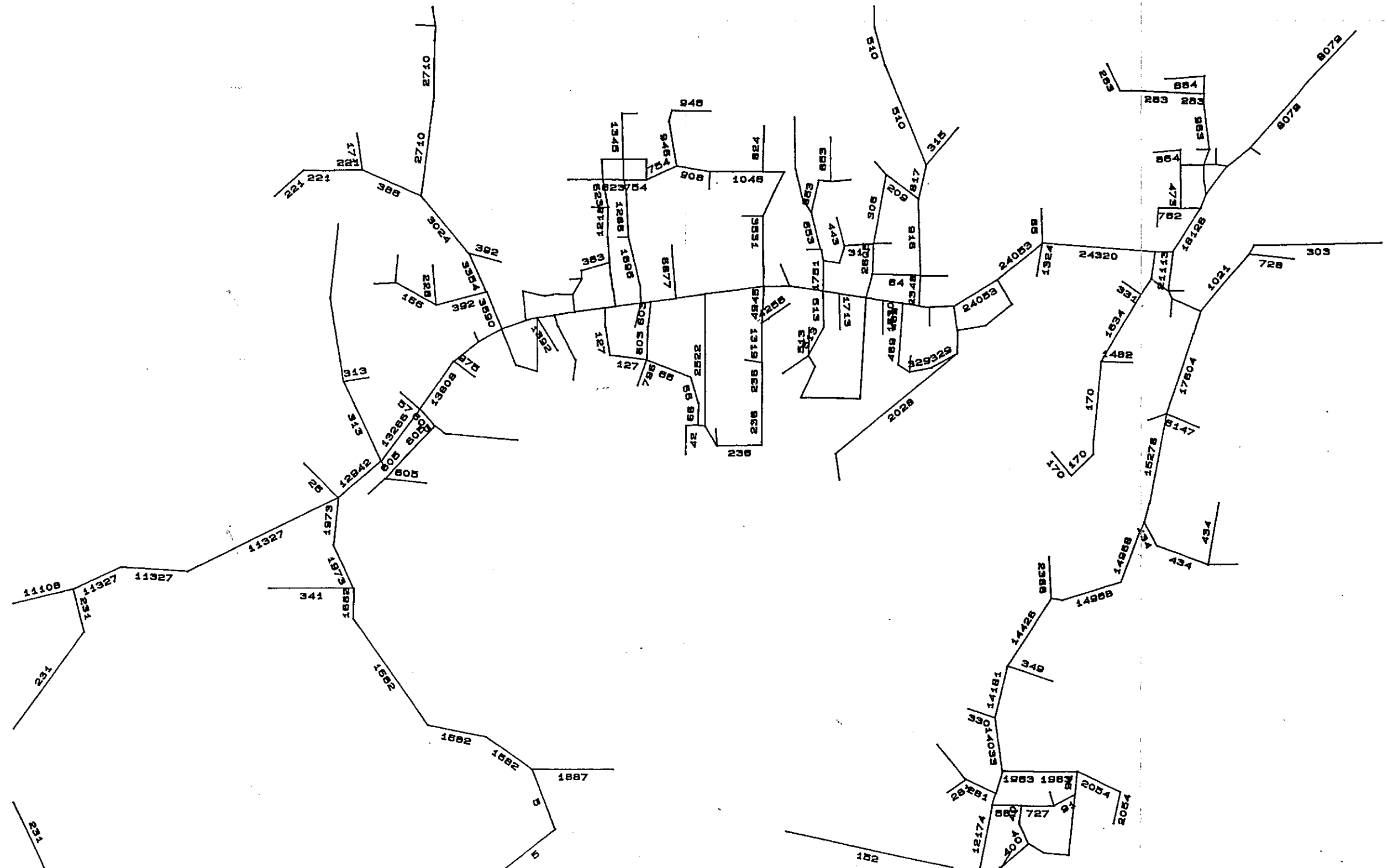
TAZ 72, Red Rock State Park = 1200 trips

Trip Distribution Changes

- Trips to and from TAZ 62, 63, and 64 were increased 18%, these areas typically do not contain seasonal households, therefore the occupancy of these zones is assumed 97% instead of the 82% used for the other zones.

City of Sedona Transportation Model						
Network Loading Results						
			Run #	9		
			Date:	10/6/95		
Road	Node#1	Node#2	Exist. Vol.	Load Vol	Difference	% Diff.
Airport	1421	1378	2200	2300	100	5%
Andante	1329	1372	2300	1900	-400	-17%
Apple Ave	1159	1150	1060	2000	940	89%
Brewer @ Brewer School	1463	1357	1600	1600	0	0%
Brewer Road @ 89A	1322	1268	2400	1000	-1400	-58%
Chapel	1626	1625	2000	2000	0	0%
Coffee Pot	1300	1336	3100	3500	400	13%
Dry Creek @ 89A	1348	1415	4350	3700	-650	-15%
Dry Creek @ Color Cove	1218	1056	2200	2700	500	23%
Jordan Road	1154	1116	3100	3500	400	13%
Meadow Lark	1648	1647	650	700	50	8%
Mount. Shadows	1283	1345	1700	1700	0	0%
Northview @ 89A	1412	1345	1600	500	-1100	-69%
Northview @ Ross	1449	1412	600	500	-100	-17%
Ranger Road	1344	1322	1300	900	-400	-31%
Sanborn @ Coffee Pot	1175	1178	1860	1700	-160	-9%
Sanborn @ Rodeo	1157	1176	1500	900	-600	-40%
Soldiers Pass	1316	1376	2800	2300	-500	-18%
SR179	1367	1385	16500	18100	1600	10%
SR179	1581	1518	13600	15300	1700	13%
SR179	1647	1676	11200	12200	1000	9%
SR89A @ Airport	1378	1323	23000	24100	1100	5%
SR89A @ Forest Rd	1269	1234	16800	18100	1300	8%
SR89A @ La Vista	1112	1034	8300	8100	-200	-2%
SR89A @ Roadrunner	1394	1393	19200	17100	-2100	-11%
SR89A @ URRL	1578	1562	12400	12900	500	4%
SR89A @ Verde Valley Ford	1332	1345	30100	25600	-4500	-15%
Sunset	1400	1336	4500	5000	500	11%
URRL	1578	2023	2050	2000	-50	-2%
Residential Links			32760	32300	-460	-1%
Commercial Links			16610	17950	1340	8%
State Highways			151100	151500	400	0%

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The first part of the paper discusses the importance of the research and the objectives of the study. It highlights the need for a comprehensive understanding of the subject matter and the role of the researcher in this process. The second part of the paper presents the methodology used in the study, including the data collection methods and the analysis techniques. The third part of the paper discusses the results of the study and the conclusions drawn from the findings. The final part of the paper provides a summary of the key points and offers suggestions for future research.

The research was conducted in a systematic and rigorous manner, following the principles of scientific inquiry. The data was collected from a variety of sources, including interviews, surveys, and archival records. The analysis was conducted using both qualitative and quantitative methods, allowing for a comprehensive understanding of the subject matter. The results of the study are presented in a clear and concise manner, highlighting the key findings and the implications of the research.

The conclusions drawn from the findings are based on a thorough analysis of the data and a consideration of the existing literature. The research suggests that there is a need for further investigation into the subject matter, particularly in the areas of [specific areas]. The findings also have important implications for [specific areas], which should be taken into account in future research and practice.

In conclusion, the research has provided a valuable contribution to the understanding of the subject matter. The findings are based on a rigorous and systematic analysis of the data, and the conclusions are well-supported by the evidence. The research also highlights the need for further investigation into the subject matter, particularly in the areas of [specific areas].

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: Average

Begin Time: Average

Date: 8/7/95

Prepared By: M. Kies

<i>Checkpoint Number</i>		<i>Average Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2			NB 89A at U. Red Rock Loop
3		38.8	NB 89A at Dry Creek
4		25.5	NB 89A at Coffee Pot
5		29.8	End of Sunset Drive
6		28.0	End of Sunset Drive
7		27.5	NB Sunset at 89A
8		17.1	NB Coffee Pot at Sanborn
9		24.2	End of Thunder Mountain
10		0.0	End of Thunder Mountain
11		23.8	EB Sanborn at Coffee Pot
12		22.0	SB Coffee Pot at 89A
13		27.4	NB 89A at Soldiers Pass
14		36.1	NB 89A at SR179
15		23.3	SB 179 at Highland Dr
16		35.7	SB 179 at Poco Diablo
17		36.7	SB 179 at Justin Circle
18			NB 179 at Justin Circle
19		33.0	NB 179 at Poco Diablo
20		31.2	NB 179 at Highland Dr.
21		27.1	NB 179 at 89A
22		20.1	NB 89A at End of Uptown
23		0.0	SB 89A at End of Uptown
24		20.0	SB 89A at Jordan Road
25		28.8	End of Jordan Road
26		0.0	End of Jordan Road
27		23.5	Jordan Road at 89A
28		23.1	SB 89A at SR179
29		37.3	SB 89A at Soldiers Pass
30		34.7	SB 89A at Coffee Pot
31		31.6	SB 89A at Dry Creek
32		38.5	SB 89A at U. Red Rock Loop
33			Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: 1Begin Time: 12:32Date: 6/29/95Prepared By: M. Kies

Checkpoint Number	Time Recorded	Speed Between Checkpoints	Description
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:31	35.6	NB 89A at Dry Creek
4	03:20	26.4	NB 89A at Shelby Drive
5	04:43	26.0	End of Shelby Drive
6	05:20	29.2	End of Sunset Drive
7	06:40	31.5	NB Sunset at 89A
8	08:58	13.0	NB Coffee Pot at Sanborn
9	11:25	24.5	End of Thunder Mountain
10	11:40	0.0	End of Thunder Mountain
11	14:05	24.8	EB Sanborn at Coffee Pot
12	15:10	27.7	SB Coffee Pot at 89A
13	17:03	22.3	NB 89A at Soldiers Pass
14	18:48	41.1	NB 89A at SR179
15	19:45	25.3	SB 179 at Highland Dr
16	22:25	33.8	SB 179 at Poco Diablo
17	24:37	35.5	SB 179 at Justin Circle
18	25:37		NB 179 at Justin Circle
19	28:06	29.0	NB 179 at Poco Diablo
20	30:58	29.3	NB 179 at Highland Dr.
21	32:02	28.1	NB 179 at 89A
22	34:03	17.9	NB 89A at End of Uptown
23	34:33	0.0	SB 89A at End of Uptown
24	35:54	13.3	SB 89A at Jordan Road
25	37:45	25.9	End of Jordan Road
26	37:47	0.0	End of Jordan Road
27	39:57	19.4	Jordan Road at 89A
28	40:44	23.0	SB 89A at SR179
29	42:30	40.8	SB 89A at Soldiers Pass
30	43:42	35.0	SB 89A at Coffee Pot
31	46:39	24.4	SB 89A at Dry Creek
32	47:54	43.2	SB 89A at U. Red Rock Loop
33		0	Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: 2Begin Time: 1:21Date: 6/29/95Prepared By: M. Kies

<i>Checkpoint Number</i>	<i>Time Recorded</i>	<i>Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:21	40.0	NB 89A at Dry Creek
4	03:26	23.0	NB 89A at Shelby Drive
5	04:59	23.2	End of Shelby Drive
6	05:36	29.2	End of Sunset Drive
7	06:53	32.7	NB Sunset at 89A
8	09:38	10.9	NB Coffee Pot at Sanborn
9	11:53	26.7	End of Thunder Mountain
10	12:03	0.0	End of Thunder Mountain
11	14:35	23.7	EB Sanborn at Coffee Pot
12	15:38	28.6	SB Coffee Pot at 89A
13	17:13	26.5	NB 89A at Soldiers Pass
14	19:11	36.6	NB 89A at SR179
15	20:30	18.2	SB 179 at Highland Dr
16	23:14	32.9	SB 179 at Poco Diablo
17	25:27	35.2	SB 179 at Justin Circle
18	25:56		NB 179 at Justin Circle
19	28:13	31.5	NB 179 at Poco Diablo
20	31:06	29.1	NB 179 at Highland Dr.
21	32:05	30.5	NB 179 at 89A
22	34:06	17.9	NB 89A at End of Uptown
23	34:25	0.0	SB 89A at End of Uptown
24	35:17	20.8	SB 89A at Jordan Road
25	36:50	31.0	End of Jordan Road
26	37:00	0.0	End of Jordan Road
27	38:28	28.6	Jordan Road at 89A
28	39:15	23.0	SB 89A at SR179
29	41:25	33.2	SB 89A at Soldiers Pass
30	42:28	40.0	SB 89A at Coffee Pot
31	44:12	41.5	SB 89A at Dry Creek
32	45:40	36.8	SB 89A at U. Red Rock Loop
33		0	Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: **3**Begin Time: **3:41**

Date: 6/29/95

Prepared By: M. Kies

<i>Checkpoint Number</i>	<i>Time Recorded</i>	<i>Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:24	38.6	NB 89A at Dry Creek
4	03:38	21.5	NB 89A at Shelby Drive
5	04:45	32.2	End of Shelby Drive
6	05:26	26.3	End of Sunset Drive
7	06:46	31.5	NB Sunset at 89A
8	09:08	12.7	NB Coffee Pot at Sanborn
9	11:39	23.8	End of Thunder Mountain
10	11:48	0.0	End of Thunder Mountain
11	14:10	25.4	EB Sanborn at Coffee Pot
12	15:20	25.7	SB Coffee Pot at 89A
13	17:54	16.4	NB 89A at Soldiers Pass
14	19:48	37.9	NB 89A at SR179
15	20:52	22.5	SB 179 at Highland Dr
16	23:31	34.0	SB 179 at Poco Diablo
17	25:42	35.7	SB 179 at Justin Circle
18	26:15		NB 179 at Justin Circle
19	28:19	34.8	NB 179 at Poco Diablo
20	31:30	26.4	NB 179 at Highland Dr.
21	32:37	26.9	NB 179 at 89A
22	34:16	21.8	NB 89A at End of Uptown
23	34:51	0.0	SB 89A at End of Uptown
24	35:34	25.1	SB 89A at Jordan Road
25	37:04	32.0	End of Jordan Road
26	37:14	0.0	End of Jordan Road
27	39:23	19.5	Jordan Road at 89A
28	39:58	30.9	SB 89A at SR179
29	41:47	39.6	SB 89A at Soldiers Pass
30	42:59	35.0	SB 89A at Coffee Pot
31	45:08	33.5	SB 89A at Dry Creek
32	46:26	41.5	SB 89A at U. Red Rock Loop
33		0	Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: **4**Begin Time: **4:29**Date: **6/29/95**Prepared By: **M. Kies**

<i>Checkpoint Number</i>	<i>Time Recorded</i>	<i>Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:21	40.0	NB 89A at Dry Creek
4	03:41	20.6	NB 89A at Shelby Drive
5	04:49	31.8	End of Shelby Drive
6	05:27	28.4	End of Sunset Drive
7	06:43	33.2	NB Sunset at 89A
8	10:57	7.1	NB Coffee Pot at Sanborn
9	13:21	25.0	End of Thunder Mountain
10	13:31	0.0	End of Thunder Mountain
11	16:00	24.2	EB Sanborn at Coffee Pot
12	17:20	22.5	SB Coffee Pot at 89A
13	18:36	33.2	NB 89A at Soldiers Pass
14	20:46	33.2	NB 89A at SR179
15	21:43	25.3	SB 179 at Highland Dr
16	24:14	35.8	SB 179 at Poco Diablo
17	26:18	37.7	SB 179 at Justin Circle
18	26:38		NB 179 at Justin Circle
19	28:49	33.0	NB 179 at Poco Diablo
20	31:16	34.3	NB 179 at Highland Dr.
21	32:15	30.5	NB 179 at 89A
22	34:10	18.8	NB 89A at End of Uptown
23	34:21	0.0	SB 89A at End of Uptown
24	35:05	24.5	SB 89A at Jordan Road
25	36:46	28.5	End of Jordan Road
26	36:57	0.0	End of Jordan Road
27	38:36	25.5	Jordan Road at 89A
28	39:19	25.1	SB 89A at SR179
29	41:27	33.8	SB 89A at Soldiers Pass
30	42:33	38.2	SB 89A at Coffee Pot
31	45:07	28.1	SB 89A at Dry Creek
32	46:40	34.8	SB 89A at U. Red Rock Loop
33		0	Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: **5**Begin Time: **5:21**

Date: 6/29/95

Prepared By: M. Kies

<i>Checkpoint Number</i>	<i>Time Recorded</i>	<i>Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:24	38.6	NB 89A at Dry Creek
4	03:00	30.0	NB 89A at Shelby Drive
5	04:02	34.8	End of Shelby Drive
6	04:42	27.0	End of Sunset Drive
7	05:58	33.2	NB Sunset at 89A
8	07:10	25.0	NB Coffee Pot at Sanborn
9	09:36	24.7	End of Thunder Mountain
10	09:45	0.0	End of Thunder Mountain
11	12:10	24.8	EB Sanborn at Coffee Pot
12	13:20	25.7	SB Coffee Pot at 89A
13	15:43	17.6	NB 89A at Soldiers Pass
14	17:37	37.9	NB 89A at SR179
15	18:32	26.2	SB 179 at Highland Dr
16	20:57	37.2	SB 179 at Poco Diablo
17	23:00	38.0	SB 179 at Justin Circle
18	23:24		NB 179 at Justin Circle
19	25:30	34.3	NB 179 at Poco Diablo
20	28:05	32.5	NB 179 at Highland Dr.
21	29:05	30.0	NB 179 at 89A
22	31:00	18.8	NB 89A at End of Uptown
23	31:05	0.0	SB 89A at End of Uptown
24	31:56	21.2	SB 89A at Jordan Road
25	33:30	30.6	End of Jordan Road
26	33:40	0.0	End of Jordan Road
27	35:15	26.5	Jordan Road at 89A
28	36:00	24.0	SB 89A at SR179
29	38:03	35.1	SB 89A at Soldiers Pass
30	39:09	38.2	SB 89A at Coffee Pot
31	40:57	40.0	SB 89A at Dry Creek
32	42:26	36.4	SB 89A at U. Red Rock Loop
33		0	Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: 6Begin Time: 11:05Date: 8/4/95Prepared By: M. Kies

<i>Checkpoint Number</i>	<i>Time Recorded</i>	<i>Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:24	38.6	NB 89A at Dry Creek
4	03:26	32.5	NB 89A at Coffee Pot
5	04:45	31.9	End of Sunset Drive
6	05:00	0.0	End of Sunset Drive
7	07:49	14.9	NB Sunset at 89A
8	09:15	20.9	NB Coffee Pot at Sanborn
9	11:48	23.5	End of Thunder Mountain
10	11:53	0.0	End of Thunder Mountain
11	14:31	22.8	EB Sanborn at Coffee Pot
12	15:42	25.4	SB Coffee Pot at 89A
13	16:53	35.5	NB 89A at Soldiers Pass
14	18:57	34.8	NB 89A at SR179
15	19:55	24.8	SB 179 at Highland Dr
16	22:35	33.8	SB 179 at Poco Diablo
17	24:46	35.7	SB 179 at Justin Circle
18	25:32		NB 179 at Justin Circle
19	27:45	32.5	NB 179 at Poco Diablo
20	30:19	32.7	NB 179 at Highland Dr.
21	32:03	17.3	NB 179 at 89A
22	33:40	22.3	NB 89A at End of Uptown
23	33:57	0.0	SB 89A at End of Uptown
24	34:47	21.6	SB 89A at Jordan Road
25	36:32	27.4	End of Jordan Road
26	36:45	0.0	End of Jordan Road
27	38:40	21.9	Jordan Road at 89A
28	39:41	17.7	SB 89A at SR179
29	41:38	36.9	SB 89A at Soldiers Pass
30	43:27	23.1	SB 89A at Coffee Pot
31	46:02	27.9	SB 89A at Dry Creek
32	47:21	41.0	SB 89A at U. Red Rock Loop
33		0	Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: 7Begin Time: 11:54Date: 8/4/95Prepared By: M. Kies

<i>Checkpoint Number</i>	<i>Time Recorded</i>	<i>Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:21	40.0	NB 89A at Dry Creek
4	03:46	27.3	NB 89A at Coffee Pot
5	05:05	31.9	End of Sunset Drive
6	05:07	0.0	End of Sunset Drive
7	07:17	19.4	NB Sunset at 89A
8	08:33	23.7	NB Coffee Pot at Sanborn
9	11:24	21.1	End of Thunder Mountain
10	11:33	0.0	End of Thunder Mountain
11	14:20	21.6	EB Sanborn at Coffee Pot
12	17:12	10.5	SB Coffee Pot at 89A
13	18:24	35.0	NB 89A at Soldiers Pass
14	20:28	34.8	NB 89A at SR179
15	21:32	22.5	SB 179 at Highland Dr
16	23:49	39.4	SB 179 at Poco Diablo
17	25:58	36.3	SB 179 at Justin Circle
18	26:30		NB 179 at Justin Circle
19	28:32	35.4	NB 179 at Poco Diablo
20	31:05	32.9	NB 179 at Highland Dr.
21	32:25	22.5	NB 179 at 89A
22	33:57	23.5	NB 89A at End of Uptown
23	33:59	0.0	SB 89A at End of Uptown
24	35:16	14.0	SB 89A at Jordan Road
25	36:55	29.1	End of Jordan Road
26	37:06	0.0	End of Jordan Road
27	38:49	24.5	Jordan Road at 89A
28	39:55	16.4	SB 89A at SR179
29	41:41	40.8	SB 89A at Soldiers Pass
30	42:48	37.6	SB 89A at Coffee Pot
31	45:18	28.8	SB 89A at Dry Creek
32	46:45	37.2	SB 89A at U. Red Rock Loop
33		0	Not Used

City of Sedona Transportation Services

Project Number 117990.03

Running Speed Study - Record of Times

Run Number: 8Begin Time: 12:42Date: 8/4/95Prepared By: M. Kies

<i>Checkpoint Number</i>	<i>Time Recorded</i>	<i>Speed Between Checkpoints</i>	<i>Description</i>
1			Not Used
2	00:00		NB 89A at U. Red Rock Loop
3	01:23	39.0	NB 89A at Dry Creek
4	04:19	22.5	NB 89A at Coffee Pot
5	05:55	26.3	End of Sunset Drive
6	06:08	0.0	End of Sunset Drive
7	07:56	23.3	NB Sunset at 89A
8	09:12	23.7	NB Coffee Pot at Sanborn
9	11:39	24.5	End of Thunder Mountain
10	11:52	0.0	End of Thunder Mountain
11	14:29	22.9	EB Sanborn at Coffee Pot
12	17:33	9.8	SB Coffee Pot at 89A
13	18:50	32.7	NB 89A at Soldiers Pass
14	21:04	32.2	NB 89A at SR179
15	22:10	21.8	SB 179 at Highland Dr
16	24:30	38.6	SB 179 at Poco Diablo
17	26:28	39.7	SB 179 at Justin Circle
18	26:56		NB 179 at Justin Circle
19	29:04	33.8	NB 179 at Poco Diablo
20	31:40	32.3	NB 179 at Highland Dr.
21	32:38	31.0	NB 179 at 89A
22	34:26	20.0	NB 89A at End of Uptown
23	34:44	0.0	SB 89A at End of Uptown
24	35:40	19.3	SB 89A at Jordan Road
25	37:33	25.5	End of Jordan Road
26	37:36	0.0	End of Jordan Road
27	39:31	21.9	Jordan Road at 89A
28	40:14	25.1	SB 89A at SR179
29	42:07	38.2	SB 89A at Soldiers Pass
30	43:29	30.7	SB 89A at Coffee Pot
31	45:59	28.8	SB 89A at Dry Creek
32	47:27	36.8	SB 89A at U. Red Rock Loop
33		0	Not Used

TAZ	County	Tract	Block Grp	Block No	1990 POP	Househlds	Split %	TAZ (1990)	AVG Household	Addr'l Househld	Addr'l Pop	TAZ Total Pop	# House
1	25	18	2	222	105	46	10%	*	*		*	*	0
1	25	18	2	215A	25	12	100%	36	0.61	16	8	44	74
2	25	18	2	216A	316	145	12%	38	2.18	3	5	43	20
3	25	18	2	216A	316	145	18%	57	2.18	1	2	59	27
4	25	18	2	216A	316	145	15%	47	2.18	21	38	85	43
5	25	18	2	218	44	17	100%	*	*		*	*	0
5	25	18	2	219	6	3	100%	*	*		*	*	0
5	25	18	2	216A	316	145	8%	25	0.80	7	5	30	39
6	25	18	2	217	28	12	100%	*	*		*	*	0
6	25	18	2	216A	316	145	10%	32	1.19	5	5	37	32
7	25	18	2	216A	316	145	2%	6	2.18	0	0	6	3
8	25	18	2	216A	316	145	5%	16	2.18	0	0	16	7
9	25	18	2	216A	316	145	30%	95	2.18	0	0	95	44
10	25	18	3	322	8	4	100%	*	*		*	*	0
10	25	18	3	323	29	16	100%	*	*		*	*	0
10	25	18	3	324	24	13	100%	*	*		*	*	0
10	25	18	3	317A	362	167	30%	170	2.04	10	17	187	93
11	25	18	3	317A	362	167	5%	18	2.17	0	0	18	8
12	25	18	3	301	6	3	100%	*	*		*	*	0
12	25	18	3	302	17	9	100%	*	*		*	*	0
12	25	18	3	303	50	18	100%	*	*		*	*	0
12	25	18	3	304	43	23	100%	*	*		*	*	0
12	25	18	3	306	12	4	100%	*	*		*	*	0
12	25	18	3	307	29	15	100%	*	*		*	*	0
12	25	18	3	310	28	12	100%	*	*		*	*	0
12	25	18	3	311	12	4	100%	*	*		*	*	0
12	25	18	3	312	12	6	100%	209	2.22	10	18	227	104
13	25	18	3	308	2	1	100%	*	*		*	*	0
13	25	18	3	309	7	4	100%	*	*		*	*	0
13	25	18	3	313	9	4	100%	*	*		*	*	0
13	25	18	3	314	26	8	100%	*	*		*	*	0
13	25	18	3	315	2	1	100%	*	*		*	*	0
13	25	18	3	316	4	2	100%	*	*		*	*	0
13	25	18	3	325	45	15	100%	*	*		*	*	0
13	25	18	3	326	0	0	100%	*	*		*	*	0
13	25	18	3	327	11	6	100%	*	*		*	*	0
13	25	18	3	328	10	6	100%	*	*		*	*	0
13	25	18	3	329	12	5	100%	*	*		*	*	0
13	25	18	3	317A	362	167	10%	164	2.39	25	49	213	94
14	25	18	3	317A	362	167	3%	11	2.17	0	0	11	5
15	25	18	2	211	0	0	100%	*	*		*	*	0
15	25	18	2	201A	13	8	100%	*	*		*	*	0
15	25	18	2	201B	1	1	100%	14	1.56		1	15	9
16	25	18	4	407	314	198	65%	204	1.59	1	1	205	130
17	25	18	4	408	11	6	100%	*	*		*	*	0
17	25	18	4	409	52	24	100%	*	*		*	*	0
17	25	18	4	402A	447	211	23%	166	2.11	85	147	313	164
18	25	18	4	407	314	198	35%	*	*		*	*	0
18	25	18	4	413	29	12	100%	*	*		*	*	0
18	25	18	4	402A	447	211	7%	170	1.77	0	0	170	96
19	25	18	4	415	47	20	100%	*	*		*	*	0
19	25	18	4	419	55	26	100%	102	2.22	5	9	111	51
20	25	18	4	414	56	20	100%	*	*		*	*	0
20	25	18	4	416	72	33	100%	*	*		*	*	0
20	25	18	4	417	103	46	100%	*	*		*	*	0
20	25	18	4	418	18	11	100%	249	2.26	11	20	269	121
21	25	18	4	402A	447	211	30%	134	2.12	9	16	150	72
22	25	18	4	403	3	1	100%	*	*		*	*	0
22	25	18	4	404	25	13	100%	*	*		*	*	0
22	25	18	4	405	20	8	100%	*	*		*	*	0
22	25	18	4	406	14	7	100%	*	*		*	*	0
22	25	18	4	402A	447	211	15%	129	2.13	22	38	167	83
23	25	18	4	402A	447	211	24%	107	2.12	0	0	107	51
24	25	18	4	402A	447	211	1%	4	2.12	4	7	11	6
25	5	16	3	317	2	1	100%	*	*		*	*	0
25	5	16	3	318	15	8	100%	*	*		*	*	0
25	5	16	3	319	10	5	100%	*	*		*	*	0
25	5	16	3	320	13	7	100%	*	*		*	*	0
25	5	16	3	322	13	7	100%	*	*		*	*	0
25	5	16	3	323	269	132	80%	*	*		*	*	0
25	5	16	3	326	7	5	100%	275	1.99	51	83	358	190
26	5	16	3	315	10	7	100%	*	*		*	*	0
26	5	16	3	316	1	1	100%	11	1.38	2	2	13	10
27	5	16	3	344	49	14	100%	*	*		*	*	0
27	5	16	3	345	2	1	100%	51	3.40	0	0	51	15
28	5	16	3	314	1	1	100%	*	*		*	*	0
28	5	16	3	339	17	9	100%	18	1.80	0	0	18	10
29	5	16	3	323	269	132	40%	*	*		*	*	0
29	5	16	3	324	10	7	100%	*	*		*	*	0
29	5	16	3	325	70	32	100%	*	*		*	*	0
29	5	16	3	341	55	29	100%	*	*		*	*	0
29	5	16	3	342	5	3	100%	167	1.98	5	8	175	89
30	5	16	3	323	269	132	10%	27	2.04	11	18	45	24
31	5	16	3	308	4	2	100%	*	*		*	*	0
31	5	16	3	309	4	3	100%	*	*		*	*	0
31	5	16	3	307A	277	153	45%	133	1.80	5	7	140	79
32	5	16	3	310	9	5	100%	*	*		*	*	0
32	5	16	3	311	5	1	100%	*	*		*	*	0
32	5	16	3	307A	277	153	35%	111	1.86	5	8	119	65
33	5	16	3	312	16	9	100%	*	*		*	*	0
33	5	16	3	330	13	7	100%	*	*		*	*	0
33	5	16	3	332	12	6	100%	*	*		*	*	0
33	5	16	3	333	12	6	100%	*	*		*	*	0
33	5	16	3	334	9	3	100%	62	2.00	5	8	70	36
34	5	16	3	327	0	0	100%	*	*		*	*	0
34	5	16	3	328	116	74	100%	*	*		*	*	0
34	5	16	3	329	35	14	100%	*	*		*	*	0
34	5	16	3	335	4	2	100%	155	1.72	6	8	163	96

TAZ	County	Tract	Block Grp	Block No	1990 POP	Househds	Split %	TAZ (1990)	AVG Household	Addr'l Househld	Addr'l Pop	TAZ Total Pop	# House
35	25	17	4	401	121	57	30%	*	*		*	*	0
35	25	17	4	402	4	1	100%	*	*		*	*	0
35	5	16	4	403	2	1	100%	42	2.21	10	18	60	29
36	5	16	3	337	6	3	100%	*	*		*	*	0
36	5	16	3	338	14	8	100%	*	*		*	*	0
36	5	16	3	307A	277	153	20%	75	1.81	13	19	94	55
37	25	17	4	401	121	57	50%	*	*		*	*	0
37	5	16	4	405	2	1	100%	*	*		*	*	0
37	5	16	4	419	2	1	100%	*	*		*	*	0
37	5	16	4	420	2	1	100%	67	2.11	4	7	74	36
38	25	17	4	401	121	57	20%	*	*		*	*	0
38	25	17	4	404	5	1	100%	*	*		*	*	0
38	25	17	4	405B	6	4	100%	*	*		*	*	0
38	5	16	4	421A	6	3	100%	41	2.12	0	0	41	19
39	5	16	4	413	4	2	100%	*	*		*	*	0
39	5	16	4	416	7	4	100%	*	*		*	*	0
39	5	16	4	417	33	19	100%	*	*		*	*	0
39	5	16	4	418	37	17	100%	81	1.93	24	38	119	66
40	5	16	4	406	23	9	100%	*	*		*	*	0
40	5	16	4	407	21	11	100%	*	*		*	*	0
40	5	16	4	408	12	6	100%	*	*		*	*	0
40	5	16	4	409	5	3	100%	*	*		*	*	0
40	5	16	4	410	18	10	100%	*	*		*	*	0
40	5	16	4	411	12	7	100%	*	*		*	*	0
40	5	16	4	412	28	15	100%	*	*		*	*	0
40	5	16	4	414	34	17	100%	*	*		*	*	0
40	5	16	4	415	12	6	100%	165	1.96	17	27	192	101
41	5	16	4	422	54	29	100%	*	*		*	*	0
41	5	16	4	423	9	4	100%	*	*		*	*	0
41	5	16	4	424	5	3	100%	*	*		*	*	0
41	5	16	4	402A	76	38	100%	144	1.95	16	26	170	90
42	5	16	3	301A	100	51	100%	*	*		*	*	0
42	5	16	3	307C	7	5	100%	107	1.91	1	2	109	57
43	5	16	2	202A	140	71	0%	0	0.00	0	0	0	0
44	5	16	2	218	3	1	100%	*	*		*	*	0
44	5	16	2	219	17	6	100%	*	*		*	*	0
44	5	16	2	216A	21	8	100%	41	2.73	0	0	41	15
45	5	16	2	214	11	6	100%	*	*		*	*	0
45	5	16	2	215	41	24	100%	*	*		*	*	0
45	5	16	2	220	2	1	100%	*	*		*	*	0
45	5	16	2	221	7	6	100%	*	*		*	*	0
45	5	16	2	222	0	0	100%	*	*		*	*	0
45	5	16	2	223	7	6	100%	*	*		*	*	0
45	5	16	2	224	8	5	100%	*	*		*	*	0
45	5	16	2	225	8	4	100%	*	*		*	*	0
45	5	16	2	226	24	16	100%	108	1.59	5	7	115	73
46	5	16	2	211	8	4	100%	*	*		*	*	0
46	5	16	2	212	63	45	100%	*	*		*	*	0
46	5	16	2	213	11	5	100%	*	*		*	*	0
46	5	16	2	227	4	2	100%	*	*		*	*	0
46	5	16	2	228	10	5	100%	*	*		*	*	0
46	5	16	2	229	19	12	100%	*	*		*	*	0
46	5	16	2	230	7	3	100%	*	*		*	*	0
46	5	16	2	231	3	2	100%	*	*		*	*	0
46	5	16	2	232	6	4	100%	*	*		*	*	0
46	5	16	2	233	23	16	100%	*	*		*	*	0
46	5	16	2	236	4	2	100%	*	*		*	*	0
46	5	16	2	238	18	13	100%	*	*		*	*	0
46	5	16	2	239	6	4	100%	*	*		*	*	0
46	5	16	2	240	5	3	100%	187	1.56	4	5	192	124
47	5	16	2	210	37	22	100%	*	*		*	*	0
47	5	16	2	241	13	7	100%	*	*		*	*	0
47	5	16	2	242	27	12	100%	*	*		*	*	0
47	5	16	2	243	35	16	100%	*	*		*	*	0
47	5	16	2	244	9	5	100%	*	*		*	*	0
47	5	16	2	245	9	4	100%	*	*		*	*	0
47	5	16	2	202A	140	71	60%	214	1.97	12	19	233	121
48	5	16	2	205	57	33	100%	*	*		*	*	0
48	5	16	2	206	10	5	100%	*	*		*	*	0
48	5	16	2	207	32	17	100%	*	*		*	*	0
48	5	16	2	208	43	26	100%	*	*		*	*	0
48	5	16	2	209	8	4	100%	*	*		*	*	0
48	5	16	2	201A	28	16	100%	178	1.76	6	9	187	107
49	5	16	2	203	11	7	100%	*	*		*	*	0
49	5	16	2	202A	140	71	40%	67	1.89	5	8	75	40
51	25	18	1	103A	82	34	10%	8	2.41	0	0	8	3
52	25	18	1	103A	82	34	90%	74	2.41	4	8	82	35
53	25	18	1	115	4	2	100%	*	*		*	*	0
53	25	18	1	110A	650	302	15%	102	2.15	22	39	141	69
55	25	18	1	114	16	6	100%	*	*		*	*	0
55	25	18	1	110A	650	302	20%	146	2.20	15	27	173	81
56	25	18	1	111	25	12	100%	*	*		*	*	0
56	25	18	1	112	44	22	100%	*	*		*	*	0
56	25	18	1	113	24	9	100%	*	*		*	*	0
56	25	18	1	116	16	9	100%	*	*		*	*	0
56	25	18	1	117	11	4	100%	*	*		*	*	0
56	25	18	1	118	12	7	100%	*	*		*	*	0
56	25	18	1	119	16	8	100%	*	*		*	*	0
56	25	18	1	120	14	8	100%	*	*		*	*	0
56	25	18	1	121	10	5	100%	*	*		*	*	0
56	25	18	1	122	36	17	100%	208	2.06	14	24	232	115
57	25	18	1	110A	650	302	15%	98	2.15	11	19	117	56
58	25	18	1	123	47	21	100%	*	*		*	*	0
58	25	18	1	110A	650	302	22%	190	2.17	14	25	215	101
59	25	18	1	131	9	6	100%	*	*		*	*	0
59	25	18	1	135	5	1	100%	*	*		*	*	0
59	25	18	1	136	8	4	100%	*	*		*	*	0
59	25	18	1	137	12	5	100%	*	*		*	*	0

TAZ	County	Tract	Block Grp	Block No	1990 POP	Househlds	Split %	TAZ (1990)	AVG Household	Addtl Household	Addtl Pop	TAZ Total Pop	# House
59	25	18	1	138	18	8	100%	*	*		*	*	0
59	25	18	1	140	9	5	100%	*	*		*	*	0
59	25	18	1	142	23	12	100%	*	*		*	*	0
59	25	18	1	143	35	17	100%	*	*		*	*	0
59	25	18	1	144	12	8	100%	*	*		*	*	0
59	25	18	1	145	8	6	100%	*	*		*	*	0
59	25	18	1	110A	650	302	8%	191	1.99	20	33	224	116
60	25	18	1	139	91	45	100%	*	*		*	*	0
60	25	18	1	141	6	3	100%	97	2.02	4	7	104	52
61	25	18	1	147	267	122	50%	134	2.19	13	23	157	74
62	25	18	1	125	18	8	100%	*	*		*	*	0
62	25	18	1	126	37	18	100%	*	*		*	*	0
62	25	18	1	129	19	8	100%	*	*		*	*	0
62	25	18	1	130	1	1	100%	*	*		*	*	0
62	25	18	1	133	79	34	100%	*	*		*	*	0
62	25	18	1	134	11	3	100%	165	2.29	26	49	214	98
63	25	18	1	148	10	7	100%	*	*		*	*	0
63	25	18	1	149	17	9	100%	*	*		*	*	0
63	25	18	1	150	19	9	100%	*	*		*	*	0
63	25	18	1	151	12	7	100%	*	*		*	*	0
63	25	18	1	152	15	8	100%	*	*		*	*	0
63	25	18	1	153	6	3	100%	*	*		*	*	0
63	25	18	1	154	29	16	100%	*	*		*	*	0
63	25	18	1	156	16	6	100%	*	*		*	*	0
63	25	18	1	157	14	5	100%	*	*		*	*	0
63	25	18	1	158	15	7	100%	*	*		*	*	0
63	25	18	1	159	14	6	100%	*	*		*	*	0
63	25	18	1	160	15	7	100%	*	*		*	*	0
63	25	18	1	161	9	6	100%	*	*		*	*	0
63	25	18	1	108A	174	89	70%	304	1.92	5	8	312	163
64	25	18	1	146	16	5	100%	*	*		*	*	0
64	25	18	1	165	64	27	100%	*	*		*	*	0
64	25	18	1	167	44	23	100%	*	*		*	*	0
64	25	18	1	168	6	4	100%	*	*		*	*	0
64	25	18	1	169	10	4	100%	140	2.22	9	16	156	72
65	25	18	1	147	267	122	50%	*	*		*	*	0
65	25	18	1	171	1	1	100%	*	*		*	*	0
65	25	18	1	172	0	0	100%	135	2.17	7	12	147	69
66	25	18	1	162	8	4	100%	*	*		*	*	0
66	25	18	1	164	20	11	100%	*	*		*	*	0
66	25	18	1	166	26	14	100%	*	*		*	*	0
66	25	18	2	222	105	46	50%	*	*		*	*	0
66	25	18	2	223	23	13	100%	*	*		*	*	0
66	25	18	2	224	39	17	100%	*	*		*	*	0
66	25	18	2	225	40	21	100%	*	*		*	*	0
66	25	18	2	226	5	3	100%	*	*		*	*	0
66	25	18	1	108A	174	89	10%	180	1.57	11	14	194	126
67	25	18	2	227	25	13	100%	*	*		*	*	0
67	25	18	2	228	33	14	100%	*	*		*	*	0
67	25	18	2	229	12	8	100%	*	*		*	*	0
67	25	18	2	230	14	8	100%	*	*		*	*	0
67	25	18	2	231	22	12	100%	*	*		*	*	0
67	25	18	2	232	92	51	100%	*	*		*	*	0
67	25	18	2	233	21	10	100%	*	*		*	*	0
67	25	18	2	234	17	9	100%	*	*		*	*	0
67	25	18	2	235	7	3	100%	*	*		*	*	0
67	25	18	2	236	1	1	100%	*	*		*	*	0
67	25	18	2	238	4	2	100%	248	1.89	5	8	256	136
68	25	18	2	222	105	46	40%	*	*		*	*	0
68	25	18	1	108A	174	89	20%	77	2.12	12	21	98	48
69	25	18	3	317A	362	167	22%	80	2.17	31	55	135	68
70	25	18	3	318	13	5	100%	*	*		*	*	0
70	25	18	3	319	22	11	100%	*	*		*	*	0
70	25	18	3	320	11	5	100%	*	*		*	*	0
70	25	18	3	321	14	6	100%	*	*		*	*	0
70	25	18	3	317A	362	167	30%	169	2.19	0	0	169	77
71	25	18	1	110A	650	302	20%	130	2.15	0	0	130	60
72	25	18	3	332	206	82	100%	*	*		*	*	0
72	25	18	3	333	8	5	100%	*	*		*	*	0
72	25	18	3	335	5	1	100%	*	*		*	*	0
72	25	18	3	336	2	1	100%	*	*		*	*	0
72	25	18	3	337	6	4	100%	*	*		*	*	0
72	25	18	3	338	46	20	100%	*	*		*	*	0
72	25	18	3	340	16	8	100%	*	*		*	*	0
72	25	18	3	317B	3	1	100%	*	*		*	*	0
72	25	18	3	331B	11	4	100%	*	*		*	*	0
72	25	18	4	402B	6	4	100%	309	2.38		39	348	130
73	25	18	3	330B	39	19	100%	39	2.05		5	44	19
74	25	18	3	341	112	44	100%	*	*		*	*	0
74	25	18	3	342	7	3	100%	*	*		*	*	0
74	25	18	3	343	5	3	100%	124	2.48		16	140	50
75	25	18	2	244	55	28	100%	*	*		*	*	0
75	25	18	2	245	20	11	100%	*	*		*	*	0
75	25	18	2	246	64	41	100%	*	*		*	*	0
75	25	18	2	247	39	23	100%	*	*		*	*	0
75	25	18	2	248	7	4	100%	*	*		*	*	0
75	25	18	2	249	16	9	100%	*	*		*	*	0
75	25	18	2	256	11	3	100%	*	*		*	*	0
75	25	18	2	258	2	1	100%	*	*		*	*	0
75	25	18	2	261	2	1	100%	*	*		*	*	0
75	25	18	2	214C	131	67	100%	347	1.85		44	391	188
77	25	17	5		1401	628	66%	925	2.23		117	1042	414
78	25	17	5		1401	628	34%	476	2.23		60	536	214
80	25	17	4	406	2	1	100%	*	*		*	*	0
80	25	17	4	405D	40	17	100%	42	2.33		5	47	18
81	25	17	4	409	31	16	100%	*	*		*	*	0
81	25	17	4	408B	383	178	100%	414	2.13		52	466	194
82	25	17	4	407	12	7	100%	*	*		*	*	0

TAZ	County	Tract	Block Grp	Block No	1990 POP	Househlds	Split %	TAZ (1990)	AVG Housechld	Addtl Housechld	Addtl Pop	TAZ Total Pop	# House
82	25	17	4	421	45	20	100%	*	*		*	*	0
82	25	17	4	422	27	14	100%	*	*		*	*	0
82	25	17	4	423	173	92	100%	*	*		*	*	0
82	25	17	4	424	11	5	100%	*	*		*	*	0
82	25	17	4	425	13	7	100%	*	*		*	*	0
82	25	17	4	426	36	20	100%	*	*		*	*	0
82	25	17	4	427	40	12	100%	*	*		*	*	0
82	25	17	4	428	50	20	100%	*	*		*	*	0
82	25	17	4	429	13	6	100%	*	*		*	*	0
82	25	17	4	430	34	14	100%	*	*		*	*	0
82	25	17	4	431	12	6	100%	*	*		*	*	0
82	25	17	4	432	42	22	100%	*	*		*	*	0
82	25	17	4	433	16	9	100%	*	*		*	*	0
82	25	17	4	436	11	6	100%	*	*		*	*	0
82	25	17	4	441	58	27	100%	*	*		*	*	0
82	25	17	4	461	23	12	100%	*	*		*	*	0
82	25	17	4	462	20	11	100%	*	*		*	*	0
82	25	17	4	405C	136	74	100%	772	2.01		97	869	384
83	25	17	4	413	16	8	100%	*	*		*	*	0
83	25	17	4	415	7	4	100%	*	*		*	*	0
83	25	17	4	416	8	4	100%	*	*		*	*	0
83	25	17	4	417	9	5	100%	*	*		*	*	0
83	25	17	4	419	8	4	100%	*	*		*	*	0
83	25	17	4	449	48	25	100%	*	*		*	*	0
83	25	17	4	450	20	9	100%	*	*		*	*	0
83	25	17	4	451	13	6	100%	*	*		*	*	0
83	25	17	4	452	4	2	100%	*	*		*	*	0
83	25	17	4	453	2	1	100%	*	*		*	*	0
83	25	17	4	454	4	3	100%	*	*		*	*	0
83	25	17	4	455	4	2	100%	*	*		*	*	0
83	25	17	4	456	25	10	100%	*	*		*	*	0
83	25	17	4	457	143	82	100%	*	*		*	*	0
83	25	17	4	458	6	3	100%	*	*		*	*	0
83	25	17	4	460	25	12	100%	*	*		*	*	0
83	25	17	4	408A	32	16	100%	374	1.91		47	421	196
84	25	17	4	434	59	31	100%	*	*		*	*	0
84	25	17	4	435	33	17	100%	*	*		*	*	0
84	25	17	4	437	21	11	100%	*	*		*	*	0
84	25	17	4	438	29	15	100%	*	*		*	*	0
84	25	17	4	439	16	8	100%	*	*		*	*	0
84	25	17	4	440	167	84	100%	*	*		*	*	0
84	25	17	4	444	3	2	100%	*	*		*	*	0
84	25	17	4	445	25	20	100%	*	*		*	*	0
84	25	17	4	446	75	42	100%	428	1.86		54	482	230

Run Number 2 - 8/24/95

Trip Generation Category										Productions										Attractions									
Code	Description		Unit	Productions by Trip Type										Attractions by Trip Type															
	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist													
1	0	0	0	2	0	0	0	0	1.6	2.4	2	0	1.6	2.4	2	0													
2	0	0	0	2	0	0	0	0	1.6	2.4	2	0	1.6	2.4	2	0.46													
3	0	0	0	2	0	0	0	0	1.6	2.4	2	0	1.6	2.4	2	0.46													
4	0	0	0	2	0	0	0	0	1.6	2.4	2	0	1.6	2.4	2	2													
5	0	0	7.6	2	0	0	0	2	1.8	7.5	7.6	2	1.8	7.5	7.6	7.6													
6	0	0	2	5.5	0	0	0	5.5	0.9	6.3	2	5.5	0.9	6.3	2	2.8													
7	0	0	0.8	0	0	0	0	0	1.6	1.2	0.8	0	1.6	1.2	0.8	0.46													
8	1	3	0	0	0	0	0	0	0	0.6	0	0	0	0.6	0	0													
TAX Num.	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6	Code #7	Code #8	Productions by Trip Type										Attractions by Trip Type										
	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist													
1	0	0	0	0	0	0	0	44	44	132	0	0	0	26	0	0													
2	0	0	0	0	0	0	0	43	43	129	0	0	0	26	0	0													
3	0	0	0	0	0	0	0	59	59	177	0	0	0	35	0	0													
4	0	0	0	0	0	0	0	85	85	255	0	0	0	51	0	0													
5	0	0	0	0	0	3	6	30	30	90	11	17	12	44	11	11													
6	10	0	0	0	0	0	3	37	37	111	22	0	21	50	22	1													
7	0	0	0	0	0	0	0	6	6	18	0	0	0	4	0	4													
8	0	0	0	0	0	0	0	16	16	48	0	0	0	10	0	0													
9	0	0	0	6	6	12	12	95	95	285	101	78	58	218	101	90													
10	0	3	0	7	6	7	0	187	187	561	80	51	33	225	80	81													
11	0	0	0	0	0	0	0	18	18	54	0	0	0	11	0	0													
12	30	6	57	20	115	54	36	227	227	681	1237	527	494	1653	1237	1111													
13	0	0	0	0	0	0	0	213	213	639	0	0	0	128	0	0													
14	0	0	0	0	0	0	0	11	11	33	0	0	0	7	0	0													
15	0	0	0	0	0	0	0	15	15	45	0	0	0	9	0	0													
16	35	76	6	7	35	7	63	205	205	615	578	109	369	803	578	366													
17	0	0	0	0	0	0	0	313	313	939	26	0	21	219	26	17													
18	5	0	22	102	53	79	78	170	170	510	881	541	498	1400	881	874													
19	0	0	0	0	0	7	0	111	111	333	14	39	6	111	14	20													
20	10	6	0	7	12	15	12	269	269	807	177	107	91	416	177	155													
21	20	11	6	7	17	15	36	150	150	450	276	117	172	450	276	210													
22	5	0	6	0	6	0	0	167	167	501	68	12	28	172	68	48													
23	0	3	0	20	35	0	21	107	107	321	329	70	133	407	329	317													
24	0	0	28	0	6	42	9	11	11	33	193	243	108	394	193	180													
25	0	0	0	0	0	3	0	358	358	1074	2	0	5	218	2	1													
26	0	0	6	14	6	0	0	13	13	39	86	12	43	101	86	76													
27	0	0	0	0	0	49	12	51	51	153	1696	688	440	1921	1696	1731													
28	0	0	30	0	215	294	3	18	18	54	2284	2047	704	3551	2284	2472													
29	15	0	0	0	0	0	3	175	175	525	32	0	29	145	32	1													
30	0	0	0	0	0	0	0	45	45	135	0	0	0	27	0	0													
31	0	0	0	21	272	41	57	140	140	420	2237	770	651	2501	2237	2250													
32	0	0	0	0	0	0	0	119	119	357	0	0	0	71	0	0													
33	0	0	6	7	12	7	3	70	70	210	134	63	54	211	134	129													
34	0	6	0	0	0	143	0	163	163	489	298	787	138	1013	298	403													
35	0	0	0	0	6	0	0	60	60	180	46	12	11	81	46	46													
36	0	0	0	0	0	0	0	94	94	282	0	0	0	56	0	0													
37	0	0	0	0	0	0	0	74	74	222	0	0	0	44	0	0													
38	0	0	0	0	0	0	0	41	41	123	0	0	0	25	0	0													
39	0	0	6	0	0	0	0	119	119	357	12	0	10	86	12	3													
40	0	0	11	0	0	0	3	192	192	576	24	0	22	145	24	6													
41	0	0	0	0	0	0	0	170	170	510	0	0	0	102	0	0													
42	5	0	6	0	6	7	3	109	109	327	84	51	40	185	84	69													
43	0	0	95	7	0	0	0	0	0	0	204	0	163	245	204	58													
44	0	0	28	7	255	214	18	41	41	123	2450	1687	736	3391	2450	2572													
45	5	0	34	20	279	22	45	115	115	345	2318	679	688	2496	2318	2258													
46	5	0	6	0	162	22	9	192	192	576	1304	445	343	1506	1304	1300													
47	0	0	0	0	0	0	0	233	233	699	0	0	0	140	0	0													
48	0	0	0	0	0	0	0	187	187	561	0	0	0	112	0	0													
49	0	0	0	0	0	0	0	75	75	225	0	0	0	45	0	0													
50	0	0	0	7	0	0	7	8	8	0	20	0	22	25	20	17													
51	0	0	11	20	52	7	33	8	8	24	498	143	202	553	498	475													
52	0	0	0	0	0	0	0	82	82	246	0	0	0	49	0	0													
53	0	0	0	0	0	0	0	141	141	423	0	0	0	85	0	0													
54	0	0	58	0	0	0	0	0	0	0	116	0	93	139	116	27													
55	0	11	0	14	52	22	33	173	173	519	516	225	206	732	516	505													
56	0	0	0	0	0	0	0	232	232	696	0	0	0	139	0	0													
57	0	0	0	0	0	0	0	117	117	351	0	0	0	70	0	0													
58	0	0	0	0	0	0	0	215	215	645	0	0	0	129	0	0													
59	0	0	0	0	0	0	0	224	224	672	0	0	0	134	0	0													
60	20	71	39	14	35	0	27	104	104	312	576	70	337	703	576	357													
61	0	0	0	0	0	0	0	157	157	471	0	0	0	94	0	0													
62	5	0	0	0	0	0	0	214	214	642	10	0	8	140	10	0													
63	0	0	0	0	0	0	0	312	312	936	0	0	0	187	0	0													
64	0	0	0	0	0	0	0	156	156	468	0	0	0	94	0	0													
65	0	10	11	48	162	172	27	147	147	441	1735	1270	600	2585	1735	1831													
66	5	0	0	0	0	0	0	194	194	582	10	0	8	128	10	0													
67	25	6	47	61	64	37	93	256	256	768	913	332	520	1312	913	779													
68	0	0	5	0	0	0	0	98	98	294	10	0	8	71	10	2													
69	0	0	0	0	6	0	0	135	135	405	46	12	11	126	46	46													
70	5	0	28	0	17	15	3	169	169	507	228	117	102	406	228	185													
71	5	0	0	7	202	22	24	130																					

Run Number 3 - 8/25/95

Run Number 3 - 8/25/95

Trip Generation Category					Productions					Attractions				
Code	Description	Unit	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist
1	Construction Industry	Employees	0	0	2	0	0	0	2	0	1.8	2.4	2	0
2	Manufacturing and Wholesale	Employees	0	0	2	0	0	0	2	0	1.8	2.4	2	0
3	Public Utility, Government, Community Service	Employees	0	0	2	0	0	0	2	0	2	2.4	2	0
4	Finance, Insurance, Real Estate	Employees	0	0	2	0	0	0	2	0	1.9	2.4	2	2
5	Retail, Entertainment	Employees	0	0	2	5.5	0	0	5	2	1.9	7.5	5	7
6	Restaurant, Lodging	Employees	0	0	2	5.5	0	0	2	5.5	1.6	6.3	2	2.8
7	Service, Professional	Employees	0	0	0.8	0	0	0	0.8	0	2	1.2	0.8	0
8	Households	Population	1.25	3	0	0	0	0	0	0	0	0.6	0	0

Number of Employees or Residents					Productions by Trip Type					Attractions by Trip Type						
TAZ Num	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6	Code #7	Code #8	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist
1	0	0	0	0	0	0	0	44	55	132	0	0	0	26	0	0
2	0	0	0	0	0	0	0	43	54	129	0	0	0	26	0	0
3	0	0	0	0	0	0	0	59	74	177	0	0	0	35	0	0
4	0	0	0	0	0	0	0	85	106	255	0	0	0	51	0	0
5	0	0	0	0	0	3	6	30	38	90	11	17	17	44	11	8
6	10	0	0	0	0	0	3	37	46	111	22	0	24	50	22	0
7	0	0	0	0	0	0	0	6	8	18	0	0	0	4	0	0
8	0	0	0	0	0	0	0	16	20	48	0	0	0	10	0	0
9	0	0	11	0	6	12	12	95	119	285	86	78	77	218	86	76
10	0	3	0	7	6	7	0	187	234	561	64	51	0	225	64	76
11	0	0	0	0	0	0	0	18	23	54	0	0	0	11	0	0
12	30	6	57	20	115	54	36	227	284	681	938	527	594	1653	938	956
13	0	0	0	0	0	0	0	213	266	639	0	0	0	128	0	0
14	0	0	0	0	0	0	0	11	14	33	0	0	0	7	0	0
15	0	0	0	0	0	0	0	15	19	45	0	0	0	9	0	0
16	35	76	6	7	35	7	63	205	256	615	487	109	429	803	487	279
17	0	0	6	7	0	0	0	313	391	939	26	0	25	219	26	14
18	5	0	22	102	53	79	78	170	213	313	743	541	630	1400	743	796
19	0	0	0	0	0	7	0	111	139	333	0	14	11	11	14	20
20	10	6	0	7	12	15	12	269	336	807	146	107	113	416	146	140
21	20	11	6	7	17	15	36	150	188	450	232	117	209	461	232	175
22	5	0	6	0	6	0	0	167	209	501	52	12	32	172	52	42
23	0	3	0	20	35	0	21	107	134	321	238	70	152	407	238	285
24	0	0	28	0	6	42	9	11	14	33	177	243	153	394	177	160
25	0	0	0	0	0	0	3	358	448	1074	2	0	6	218	2	0
26	0	0	6	14	6	0	0	13	16	39	70	12	50	101	70	70
27	0	0	0	0	0	49	12	51	64	153	1153	688	500	1921	1153	1600
28	0	0	30	0	215	294	3	18	23	54	1725	2047	945	3551	1725	2328
29	15	0	0	0	0	0	3	175	219	525	32	0	33	145	32	0
30	0	0	0	0	0	0	0	45	56	135	0	0	0	27	0	0
31	0	0	0	21	272	41	57	140	175	420	1530	770	736	2501	1530	2061
32	0	0	0	0	0	0	0	119	149	357	0	0	0	71	0	0
33	0	0	6	7	12	7	3	70	88	210	102	63	65	211	102	118
34	0	6	0	0	0	143	0	163	204	489	298	787	240	1013	298	400
35	0	0	0	0	6	0	0	60	75	180	30	12	11	81	30	42
36	0	0	0	0	0	0	0	94	118	282	0	0	0	56	0	0
37	0	0	0	0	0	0	0	74	93	222	0	0	0	44	0	0
38	0	0	0	0	0	0	0	41	51	123	0	0	0	25	0	0
39	0	0	6	0	0	0	0	119	149	357	12	0	12	86	12	0
40	0	0	11	0	0	0	3	192	240	576	24	0	28	145	24	0
41	0	0	0	0	0	0	0	170	213	510	0	0	0	102	0	800
42	5	0	6	0	6	7	3	109	136	327	68	51	50	185	68	62
43	0	0	95	7	0	0	0	0	0	204	0	0	203	245	204	14
44	0	0	28	7	235	214	18	41	51	123	1787	1687	932	3391	1787	2398
45	5	0	34	20	279	22	45	115	144	345	1593	679	770	2496	1593	2055
46	5	0	6	0	162	22	9	192	240	576	883	445	382	1506	883	1196
47	0	0	0	0	0	0	0	233	291	699	0	0	0	140	0	0
48	0	0	0	0	0	0	0	187	234	561	0	0	0	112	0	0
49	0	0	0	0	0	0	0	75	94	225	0	0	0	45	0	0
50	0	0	0	7	0	0	7	0	0	20	0	0	27	25	20	14
51	0	0	11	20	52	7	33	8	10	24	362	143	236	553	362	424
52	0	0	0	0	0	0	0	82	103	246	0	0	0	49	0	0
53	0	0	0	0	0	0	0	141	176	423	0	0	0	85	0	0
54	0	0	58	0	0	0	0	0	0	0	116	0	116	139	116	0
55	0	11	0	14	52	22	33	173	216	519	380	225	246	732	380	454
56	0	0	0	0	0	0	0	232	290	696	0	0	0	139	0	0
57	0	0	0	0	0	0	0	117	146	351	0	0	0	70	0	0
58	0	0	0	0	0	0	0	215	269	645	0	0	0	129	0	0
59	0	0	0	0	0	0	0	224	280	672	0	0	0	134	0	0
60	20	71	39	14	35	0	27	104	130	312	485	70	389	703	485	273
61	0	0	0	0	0	0	0	157	196	471	0	0	0	94	0	0
62	5	0	0	0	0	0	0	214	268	642	10	0	9	140	10	0
63	0	0	0	0	0	0	0	312	390	936	0	0	0	187	0	0
64	0	0	0	0	0	0	0	156	195	468	0	0	0	94	0	0
65	0	10	11	48	162	172	27	147	184	441	1314	1270	768	2585	1314	1712
66	5	0	0	0	0	0	0	194	243	582	10	0	9	128	10	0
67	25	6	47	61	64	37	93	256	320	768	746	332	633	1312	746	674
68	0	0	5	0	0	0	0	98	123	294	10	0	10	71	10	0
69	0	0	0	0	6	0	0	135	169	405	30	12	11	126	30	42
70	5	0	28	0	17	15	3	169	211	507	183	117	127	406	183	161
71	5	0	0	7	202	22	24	130	163	390	1097	525	489	1789	1097	1490
CITY	210	209	569	424	2303	1315	682	8707	10893	26121	17512	11846	10540	34988	17512	21455
72	0	0	0	0	0	0	0	348	435	1044	0	0	0	209	0	0
73	0	0	25	0	0	0	0	44	55	132	50	0	50	86	50	0
74	0	0	0	0	0	0	0	74	93	222	0	0	0	44	0	0
75	0	0	0	0	0	0	0	391	489	1173	0	0	0	235	0	0
76	0	0	0	0	0	0	0	4	5	12	0	0	0	2	0	0
77	20	20	0	0	140	28	13	1042	1303	3126	886	434	449	2011	886	1058
78	0	0	0	0	0	0	0	536	670	1608	0	0	0	322	0	0
79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	47	59	141	0	0	0	28	0	0
81	0	0	13	0	0	0	15	466	583	1398	38	0	56	329	38	0
82	0	0	0	0	0	0	0	869	1086	2607	52	0	52	584	52	0
83	0	0	0	0	0	0	0	421	526	1263	0	0	0	253	0	0
84	80	80	80	71	112	112	71	482	603	1446	1463	840	1117	2666	1463	1240
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CNTY	100	100	164	71	252	140	99	4724	5907	14172	2489	1274	1724	6769	2489	2298
TOTL	310	309	733	495	2555	1455	781	13431	16800	40293	22001	13120	12264	41757	20001	23753
%									19%	45%	22%	15%	13%	43%	20%	24%

Total Internal Productions										90,214									
Total Internal Attractions										97,775									
TAZ	1994 Per. Trips	Productions	Attractions		%	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	PROD	ATTR
86	625	381	244		2%	35	85	42	68	15	52	25	0	15	52	25	0	EX-EX	EX-EX
87	8750	5337	3413		25%	497	1192	592	857	214	729	349	0	2200	729	349	0	150	151

Trip Generation Category										Productions										Attractions									
Description										HB-Work					HB-Other					HB-Work					HB-Other				
Unit										Tourist					Non-HB					Tourist					Non-HB				
Employees										0					0					0					0				
Employees										0					0					0					0				
Employees										0					0					0					0				
Employees										0					0					0					0				
Employees										0					0					0					0				
Employees										0					0					0					0				
Employees										0					0					0					0				
Population										1.25					3					0					0.6				

Run Number 5 - 8/25/95

Run Number 5 - 8/25/95																											
Trip Generation Category														Productions										Attractions			
Code	Description			Unit	Productions by Trip Type										Attractions by Trip Type												
	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist											
1	0	0	0	0	55	132	0	0	0	0	0	0	0	26	0	0	0										
2	0	0	0	0	54	129	0	0	0	0	0	0	0	26	0	0	0										
3	0	0	0	0	74	177	0	0	0	0	0	0	0	35	0	0	0										
4	0	0	0	0	106	255	0	0	0	0	0	0	0	51	0	0	0										
5	0	0	0	0	38	90	11	17	17	44	11	8	0	44	11	8	0										
6	10	0	0	0	46	111	22	0	0	50	22	0	0	50	22	0	0										
7	0	0	0	0	8	18	0	0	0	4	0	0	0	4	0	0	0										
8	0	0	0	0	20	48	0	0	0	10	0	0	0	10	0	0	0										
9	0	0	0	0	119	285	86	78	77	218	86	76	0	218	86	76	0										
10	0	0	0	0	234	561	64	51	41	225	64	76	0	225	64	76	0										
11	0	0	0	0	23	54	0	0	0	11	0	0	0	11	0	0	0										
12	30	6	57	20	284	681	938	527	594	1653	938	996	0	1653	938	996	0										
13	0	0	0	0	213	639	0	0	0	128	0	0	0	128	0	0	0										
14	0	0	0	0	14	33	0	0	0	7	0	0	0	7	0	0	0										
15	0	0	0	0	19	45	800	1025	430	1704	800	1120	0	1704	800	1120	0										
16	35	76	6	7	256	615	487	109	429	803	487	279	0	803	487	279	0										
17	0	0	0	0	391	939	26	0	25	219	26	14	0	219	26	14	0										
18	5	0	22	102	213	510	743	541	630	1400	743	796	0	1400	743	796	0										
19	0	0	0	0	111	333	14	39	11	111	14	20	0	111	14	20	0										
20	10	6	0	7	336	807	146	107	113	416	146	140	0	416	146	140	0										
21	20	11	6	7	17	15	36	117	209	461	232	175	0	461	232	175	0										
22	5	0	6	0	188	450	52	12	32	172	52	42	0	172	52	42	0										
23	0	3	0	20	209	501	2	0	6	218	2	0	0	218	2	0	0										
24	0	0	0	0	448	1074	0	0	0	71	0	0	0	71	0	0	0										
25	0	0	0	0	16	39	70	12	50	101	70	70	0	101	70	70	0										
26	0	0	6	14	64	153	1153	688	500	1921	1153	1600	0	1921	1153	1600	0										
27	0	0	0	0	209	49	1725	2047	945	3551	1725	2328	0	3551	1725	2328	0										
28	0	0	0	0	215	294	3	0	33	145	32	0	0	145	32	0	0										
29	15	0	0	0	0	0	0	0	0	27	0	0	0	27	0	0	0										
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
31	0	0	0	0	21	272	41	770	736	2501	1530	2061	0	2501	1530	2061	0										
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
33	0	0	6	7	88	210	102	63	65	211	102	118	0	211	102	118	0										
34	0	0	6	0	204	489	298	787	240	813	298	400	0	813	298	400	0										
35	0	0	0	0	75	180	30	12	11	81	30	42	0	81	30	42	0										
36	0	0	0	0	94	282	0	0	0	56	0	0	0	56	0	0	0										
37	0	0	0	0	93	222	0	0	0	44	0	0	0	44	0	0	0										
38	0	0	0	0	51	123	0	0	0	25	0	0	0	25	0	0	0										
39	0	0	0	0	149	357	12	0	12	86	12	0	0	86	12	0	0										
40	0	0	11	0	240	576	24	0	28	145	24	0	0	145	24	0	0										
41	0	0	0	0	213	510	500	200	190	852	500	700	0	852	500	700	0										
42	5	0	6	0	136	327	68	51	50	185	68	62	0	185	68	62	0										
43	0	0	95	7	0	0	204	0	203	245	204	14	0	245	204	14	0										
44	0	0	28	7	51	123	1787	1687	932	3391	1787	2398	0	3391	1787	2398	0										
45	5	0	34	20	144	345	898	401	506	1453	898	1082	0	1453	898	1082	0										
46	5	0	6	0	240	576	473	281	226	891	473	622	0	891	473	622	0										
47	0	0	0	0	291	699	0	0	0	140	0	0	0	140	0	0	0										
48	0	0	0	0	234	561	0	0	0	112	0	0	0	112	0	0	0										
49	0	0	0	0	94	225	0	0	0	45	0	0	0	45	0	0	0										
50	0	0	0	0	0	0	20	0	27	25	20	14	0	25	20	14	0										
51	0	0	11	20	0	24	362	143	236	553	362	424	0	553	362	424	0										
52	0	0	0	0	103	246	0	0	0	49	0	0	0	49	0	0	0										
53	0	0	0	0	176	423	0	0	0	85	0	0	0	85	0	0	0										
54	0	0	58	0	0	0	116	0	116	139	116	0	0	139	116	0	0										
55	0	0	11	0	216	519	380	225	246	732	380	454	0	732	380	454	0										
56	0	0	0	0	290	696	0	0	0	139	0	0	0	139	0	0	0										
57	0	0	0	0	146	351	0	0	0	70	0	0	0	70	0	0	0										
58	0	0	0	0	215	269	0	0	0	129	0	0	0	129	0	0	0										
59	0	0	0	0	280	672	0	0	0	134	0	0	0	134	0	0	0										
60	20	71	39	14	130	312	485	70	389	703	485	273	0	703	485	273	0										
61	0	0	0	0	196	471	0	0	0	94	0	0	0	94	0	0	0										
62	5	0	0	0	268	642	10	0	9	140	10	0	0	140	10	0	0										
63	0	0	0	0	390	936	0	0	0	187	0	0	0	187	0	0	0										
64	0	0	0	0	195	468	0	0	0	94	0	0	0	94	0	0	0										
65	0	10	11	48	184	441	1314	1270	768	2385	1314	1712	0	2385	1314	1712	0										
66	5	0	66	0	243	582	10	0	9	128	10	0	0	128	10	0	0										
67	25	6	47	61	370	768	746	332	633	1312	746	674	0	1312	746	674	0										
68	0	0	5	0	123	294	10	0	10	71	10	0	0	71	10	0	0										
69	0	0	0	0	169	405	30	12	11	126	30	42	0	126	30	42	0										
70	5	0	28	0	211	507	183	117	127	406	183	161	0	406	183	161	0										
71	5	0	0	7	163	390	1097	525	489	1789	1097	1490	0	1789	1097	1490	0										
QTY	210	209	541	424	10893	26121	17955	12556	10749	36025	17955	21363	0	36025	17955	21363	0										
72	0	0	0	0	435	1044	0	0	0	209	0	0	0	209	0	0	0										
73	0	0	25	0	55	132	50	0	50	86	50	0	0	86	50	0	0										
74	0	0	0	0	93	222	0	0	0	44	0	0	0	44	0	0	0										
75	0	0	0	0	489	1173	0	0	0	235	0	0	0	235	0	0	0										
76	0	0	0	0	5	12	0	0	0	2	0	0	0	2	0	0	0										
77	20	20	20	0	1303	3126	886	434	449	2011	886	1058	0	2011	886	1058	0										
78	0	0	0	0	670	1608	0	0	0	322	0	0	0	322	0	0	0										
79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
80	0	0	0	0	59	141	0	0	0	28	0	0	0	28	0	0	0										
81	0	0	13	0	583	1398	38	0	56	329	38	0	0	329	38	0	0										
82	0	0	0	0	1086	2607	52	0	52	584	52	0	0	584	52	0	0										
83	0	0	0	0	0	1263	0	0	0	253	0	0	0	253	0	0	0										
84	80	80	80	71	603	1446	1463	840	1117	2666	1463	1240	0	2666	1463	1240	0										
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
CNTY	100	100	164	71	5907	14172	2489	1274	1724	6769	2489	2298	0	6769	2489	2298	0										
TOTL	310	309	705	495	16800	40293	20444	13830	12473	42794	20444	23661	0	42794	20444	23661	0										
%					18%	44%	22%	13%	13%	43%	21%	24%		43%	21%	24%											
Total Internal Productions: 91,367																		91,367									
Total Internal Attractions: 99,372																		99,372									
TAZ	1994 Per. Trips	Productions	Attractions		%														PROD	ATTR	EX-EX	EX-EX					
86	750	448	302		2%														150	187	150	187					
87	10500	6269	4231		23%														2200	2619	2200	2619					
88	18000	10747	7253		44%														4000	4490	4000	4490					
89	12000	7164	4836		29%														3500	2994	3500	2994					
TOTL																			9850	10990.2	9850	10990.2					
Total Productions																		115,995									
Total Attractions																		115,995									

Run Number 7 - 8/29/95

Trip Generation Category										Productions				Attractions			
Code	Description			Unit		HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist
1	Construction Industry			Employees		0	0	2	0	1.8	2.4	2	0	1.8	2.4	2	0
2	Manufacturing and Wholesale			Employees		0	0	2	0	1.8	2.4	2	0	1.8	2.4	2	0
3	Public Utility, Government, Community Service			Employees		0	0	2	0	2	2.4	2	0	2	2.4	2	0
4	Finance, Insurance, Real Estate			Employees		0	0	2	0	1.9	2.4	2	2	1.9	2.4	2	2
5	Retail, Entertainment			Employees		0	0	5	2	1.9	7.5	5	7	1.9	7.5	5	7
6	Restaurant, Lodging			Employees		0	0	2	5.5	1.6	6.3	2	2.8	1.6	6.3	2	2.8
7	Service, Professional			Employees		0	0	0.8	0	2	1.2	0.8	0	2	1.2	0.8	0
8	Households			Population		1.25	3	0	0	0	0.6	0	0	0	0.6	0	0
9	Special Generators			Trips		0	0.2	0.2	0.6	0	0.2	0	0.6	0	0.2	0	0
TAZ	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6	Code #7	Code #8	Code #9	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist
1	0	0	0	0	0	0	0	44	0	55	132	0	0	0	26	0	0
2	0	0	0	0	0	0	0	43	0	54	129	0	0	0	26	0	0
3	0	0	0	0	0	0	0	59	0	74	177	0	0	0	35	0	0
4	0	0	0	0	0	0	0	85	0	106	255	0	0	0	51	0	0
5	0	0	0	0	0	3	6	30	0	38	90	11	17	17	44	11	8
6	10	0	0	0	0	0	3	37	0	46	111	22	0	24	50	22	0
7	0	0	0	0	0	0	0	6	0	8	18	0	0	0	4	0	0
8	0	0	0	0	0	0	0	16	0	20	48	0	0	0	10	0	0
9	0	0	11	0	6	12	12	95	0	119	285	86	78	77	218	86	76
10	0	3	0	7	6	7	0	187	0	234	561	64	51	41	225	64	76
11	0	0	0	0	0	0	0	18	0	23	54	0	0	0	11	0	0
12	30	6	57	20	115	54	36	227	0	284	681	938	527	594	1653	938	996
13	0	0	0	0	0	0	0	213	0	266	639	0	0	0	128	0	0
14	0	0	0	0	0	0	0	11	0	14	33	0	0	0	7	0	0
15	0	0	0	0	0	150	0	15	3000	19	645	900	2625	240	1554	900	420
16	35	76	6	7	35	7	63	205	0	256	615	487	109	429	803	487	279
17	0	0	6	7	0	0	0	313	0	391	939	26	0	25	219	26	14
18	5	0	22	102	53	79	78	170	0	213	510	743	541	630	1400	743	796
19	0	0	0	0	0	7	0	111	0	139	333	14	39	11	111	14	20
20	10	6	0	7	12	15	12	269	0	336	807	146	107	113	416	146	140
21	20	11	6	7	17	15	36	150	0	188	450	232	117	209	461	232	175
22	5	0	6	0	6	0	0	167	0	209	501	52	12	32	172	52	42
23	0	3	0	20	35	0	21	107	0	134	321	238	70	152	407	238	285
24	0	0	28	0	6	42	9	11	2000	14	433	577	1443	153	794	577	160
25	0	0	0	0	0	0	3	358	0	448	1074	2	0	6	218	2	0
26	0	0	6	14	6	0	0	13	0	16	39	70	12	50	101	70	70
27	0	0	0	0	209	49	12	51	0	64	153	1153	688	500	1921	1153	1600
28	0	0	30	0	215	294	3	18	0	23	54	1725	2047	945	3551	1725	2328
29	15	0	0	0	0	0	3	175	0	219	525	32	0	33	145	32	0
30	0	0	0	0	0	0	0	45	0	56	135	0	0	0	27	0	0
31	0	0	0	21	272	41	57	140	0	175	420	1530	770	736	2501	1530	2061
32	0	0	0	0	0	0	0	119	0	149	357	0	0	0	71	0	0
33	0	0	6	7	12	7	3	70	0	88	210	102	63	65	211	102	118
34	0	6	0	0	0	143	0	163	0	204	489	298	787	240	1013	298	400
35	0	0	0	0	6	0	0	60	0	75	180	30	12	11	81	30	42
36	0	0	0	0	0	0	0	94	0	118	282	0	0	0	56	0	0
37	0	0	0	0	0	0	0	74	0	93	222	0	0	0	44	0	0
38	0	0	0	0	0	0	0	41	0	51	123	0	0	0	25	0	0
39	0	0	6	0	0	0	0	119	0	149	357	12	0	12	86	12	0
40	0	0	11	0	0	0	3	192	0	240	576	24	0	28	145	24	0
41	0	0	0	0	0	0	0	170	2000	213	910	400	1200	0	502	400	0
42	5	0	6	0	6	7	3	109	0	136	327	68	51	50	185	68	62
43	0	0	95	7	0	0	0	0	0	0	0	204	0	203	245	204	14
44	0	0	28	7	235	214	18	41	0	51	123	1787	1687	932	3391	1787	2398
45	5	0	34	20	140	22	45	115	0	144	345	898	401	506	1453	898	1082
46	5	0	6	0	80	22	9	192	0	240	576	473	281	226	891	473	622
47	0	0	0	0	0	0	0	233	0	291	699	0	0	0	140	0	0
48	0	0	0	0	0	0	0	187	0	234	561	0	0	0	112	0	0
49	0	0	0	0	0	0	0	75	0	94	225	0	0	0	45	0	0
50	0	0	0	7	0	0	7	0	0	0	0	20	0	27	25	20	14
51	0	0	11	20	52	7	33	8	0	10	24	362	143	236	553	362	424
52	0	0	0	0	0	0	0	82	0	103	246	0	0	0	49	0	0
53	0	0	0	0	0	0	0	141	0	176	423	0	0	0	85	0	0
54	0</																

Run Number 8 - 10/02/95

Trip Generation Category										Productions				Attractions			
Code	Description				Unit	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist
1	Construction Industry				Employees	0	0	1.5	0	1.8	2.4	2	0	1.8	2.4	2	0
2	Manufacturing and Wholesale				Employees	0	0	1.5	0	1.8	2.4	2	0	1.8	2.4	2	0
3	Public Utility, Government, Community Service				Employees	0	0	1.5	0	2	2.4	2	0	2	2.4	2	0
4	Finance, Insurance, Real Estate				Employees	0	0	1.5	0	1.9	2.4	2	2	1.9	2.4	2	2
5	Retail, Entertainment				Employees	0	0	5	2	1.9	7.5	5	7	1.9	7.5	5	7
6	Restaurant, Lodging				Employees	0	0	2	5.5	1.6	6.3	2	2.8	1.6	6.3	2	2.8
7	Service, Professional				Employees	0	0	0.8	0	2	1.2	0.8	0	2	1.2	0.8	0
8	Households				Population	1.33	3	0	0	0	0.6	0	0	0	0.6	0	0
9	Special Generators				Trips	0	0.2	0.2	0.6	0	0.2	0.2	0.6	0	0.2	0.2	0.6
TAZ	Number of Employees or Residents				Code #9	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist
1	0	0	0	0	0	44	0	0	0	59	132	0	0	0	26	0	0
2	0	0	0	0	0	43	0	0	0	57	129	0	0	0	26	0	0
3	0	0	0	0	0	59	0	0	0	78	177	0	0	0	35	0	0
4	0	0	0	0	0	85	0	0	0	113	255	0	0	0	51	0	0
5	0	0	0	0	3	30	0	0	0	40	90	11	17	17	44	11	8
6	10	0	0	0	0	37	0	0	0	49	111	17	0	24	50	22	0
7	0	0	0	0	8	6	0	0	0	8	18	0	0	0	4	0	0
8	0	0	0	0	0	16	0	0	0	21	48	0	0	0	10	0	0
9	0	0	11	0	6	12	12	95	0	126	285	80	78	77	218	86	76
10	0	3	0	7	6	7	0	187	0	249	561	59	51	41	225	64	76
11	0	0	0	0	0	18	0	0	0	24	54	0	0	0	11	0	0
12	30	6	57	20	115	54	36	227	0	302	681	881	527	594	1653	938	996
13	0	0	0	0	0	213	0	0	0	283	639	0	0	0	128	0	0
14	0	0	0	0	0	11	0	13	0	15	33	0	0	0	7	0	0
15	0	0	0	0	0	15	2000	0	0	20	445	600	1750	160	1039	600	1480
16	35	76	6	7	35	205	63	205	0	273	615	425	109	429	803	487	279
17	0	0	6	7	0	313	0	313	0	416	939	20	0	25	219	26	14
18	5	0	22	102	53	79	78	170	0	226	510	679	541	630	1400	743	796
19	0	0	0	0	0	111	0	111	0	148	333	14	39	11	111	14	20
20	10	6	0	7	12	269	12	269	0	358	807	134	107	113	416	146	140
21	20	11	6	7	17	15	36	150	0	200	450	210	117	209	461	232	175
22	5	0	6	0	6	0	0	167	0	222	501	47	12	32	172	52	42
23	0	3	0	20	35	0	21	107	0	142	321	226	70	152	407	238	285
24	0	0	28	0	6	15	9	11	1500	15	333	463	1143	153	694	477	1060
25	0	0	0	0	0	358	0	358	0	476	1074	2	0	6	218	2	0
26	0	0	6	14	6	0	0	13	0	17	39	60	12	50	101	70	70
27	0	0	0	0	209	49	12	51	0	68	153	1153	688	500	1921	1153	1600
28	0	0	30	0	215	294	3	18	0	24	54	1710	2047	945	3551	1725	2328
29	15	0	0	0	0	175	0	175	0	233	525	25	0	33	145	32	0
30	0	0	0	0	0	45	0	45	0	60	135	0	0	0	27	0	0
31	0	0	0	21	272	41	57	140	0	186	420	1519	770	736	2501	1530	2061
32	0	0	0	0	0	119	0	119	0	158	357	0	0	0	71	0	0
33	0	0	6	7	12	7	3	70	0	93	210	96	63	65	211	102	118
34	0	6	0	0	0	163	0	163	0	217	489	295	787	240	1013	298	400
35	0	0	0	0	6	60	0	60	0	80	180	30	12	11	81	30	42
36	0	0	0	0	0	94	0	94	0	125	282	0	0	0	56	0	0
37	0	0	0	0	0	74	0	74	0	98	222	0	0	0	44	0	0
38	0	0	0	0	0	41	0	41	0	55	123	0	0	0	25	0	0
39	0	0	6	0	0	119	0	119	0	158	357	9	0	12	86	12	0
40	0	0	11	0	0	192	0	192	0	255	576	19	0	28	145	24	0
41	0	0	0	0	0	170	2000	170	0	226	910	400	1200	0	502	400	1200
42	5	0	6	0	6	109	0	109	0	145	327	63	51	50	185	68	62
43	0	0	95	7	0	0	0	0	0	0	0	153	0	203	245	204	14
44	0	0	28	7	255	214	18	41	0	55	123	1770	1687	932	3391	1787	2398
45	5	0	34	20	140	22	45	115	0	153	345	869	401	506	1453	898	1082
46	5	0	6	0	80	22	9	192	0	255	576	468	281	226	891	473	622
47	0	0	0	0	0	233	0	233	0	310	699	0	0	0	140	0	0
48	0	0	0	0	0	187	0	187	0	249	561	0	0	0	112	0	0
49	0	0	0	0	0	75	0	75	0	100	225	0	0	0	45	0	0
50	0	0	0	7	0	0	7	0	0	0	0	16	0	27	25	20	14
51	0	0	11	20	52	7	33	8	0	11	24	347	143	236	553	362	424
52	0	0	0	0	0	82	0	82	0	109	246	0	0	0	49	0	0
53	0																

Run Number 9 - 10/06/95

Trip Generation Category										Productions				Attractions			
Code	Description		Unit	Productions			Attractions										
	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist					
1	0	0	1.5	0	0	0	0	0	1.8	2.4	2	0					
2	0	0	1.5	0	0	0	0	0	1.8	2.4	2	0					
3	0	0	1.5	0	0	0	0	0	2	2.4	2	0					
4	0	0	1.5	0	0	0	0	0	1.9	2.4	2	2					
5	0	0	5	2	0	0	0	2	1.9	7.5	5	7					
6	0	0	2	5.5	0	0	0	5.5	1.6	6.3	2	2.8					
7	0	0	0.8	0	0	0	0	0	2	1.2	0.8	0					
8	1.33	3	0	0	0	0	0	0	0	0.6	0	0					
9	0	0.2	0.2	0.6	0	0	0	0.6	0	0.2	0.2	0.6					
TAZ	Productions by Trip Type				Attractions by Trip Type												
Nm.	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist	HB-Work	HB-Other	Non-HB	Tourist					
1	59	132	0	0	0	0	0	0	0	26	0	0					
2	57	129	0	0	0	0	0	0	0	26	0	0					
3	78	177	0	0	0	0	0	0	0	35	0	0					
4	113	255	0	0	0	0	0	0	0	51	0	0					
5	40	90	11	17	4	11	17	17	17	44	11	8					
6	49	111	17	0	24	50	22	0	24	50	22	0					
7	8	18	0	0	0	4	0	0	0	4	0	0					
8	21	48	0	0	0	10	0	0	0	10	0	0					
9	126	285	80	78	77	218	86	76	77	218	86	76					
10	249	561	59	51	41	225	64	76	41	225	64	76					
11	24	54	0	0	0	11	0	0	0	11	0	0					
12	302	681	881	527	594	1653	938	996	594	1653	938	996					
13	283	639	0	0	0	128	0	0	0	128	0	0					
14	15	33	0	0	0	7	0	0	0	7	0	0					
15	20	265	420	1210	160	859	420	940	160	859	420	940					
16	273	615	425	109	429	803	487	279	429	803	487	279					
17	416	939	20	26	25	219	26	14	25	219	26	14					
18	226	510	679	541	630	1400	743	796	630	1400	743	796					
19	148	333	14	39	11	111	14	20	11	111	14	20					
20	358	807	134	107	113	416	146	140	113	416	146	140					
21	200	450	210	117	209	461	232	175	209	461	232	175					
22	222	501	47	12	32	172	52	42	32	172	52	42					
23	321	226	70	238	152	407	238	285	152	407	238	285					
24	15	33	0	0	6	218	2	0	6	218	2	0					
25	476	1074	2	0	50	101	70	70	50	101	70	70					
26	17	39	60	12	12	86	12	0	12	86	12	0					
27	153	357	9	0	12	86	12	0	12	86	12	0					
28	24	54	1710	2047	945	3551	1725	2328	945	3551	1725	2328					
29	233	665	165	420	33	285	172	420	33	285	172	420					
30	60	135	0	0	0	27	0	0	0	27	0	0					
31	186	420	1519	770	736	2501	1530	2061	736	2501	1530	2061					
32	158	357	0	0	0	71	0	0	0	71	0	0					
33	93	210	96	63	65	211	102	118	65	211	102	118					
34	217	489	295	787	240	1013	298	400	240	1013	298	400					
35	80	180	30	12	11	81	30	42	11	81	30	42					
36	125	282	0	0	0	56	0	0	0	56	0	0					
37	98	222	0	0	0	44	0	0	0	44	0	0					
38	55	123	0	0	0	25	0	0	0	25	0	0					
39	158	357	9	0	12	86	12	0	12	86	12	0					
40	255	576	19	0	28	145	24	0	28	145	24	0					
41	226	910	400	1200	0	502	400	1200	0	502	400	1200					
42	145	327	63	51	50	185	68	62	50	185	68	62					
43	0	0	153	0	203	245	204	14	203	245	204	14					
44	55	123	1770	1687	932	3391	1787	2398	932	3391	1787	2398					
45	153	345	869	401	506	1453	898	1082	506	1453	898	1082					
46	255	576	468	281	226	891	473	622	226	891	473	622					
47	310	699	0	0	0	140	0	0	0	140	0	0					
48	249	561	0	0	0	112	0	0	0	112	0	0					
49	100	225	0	0	0	45	0	0	0	45	0	0					
50	0	0	16	0	27	25	20	14	27	25	20	14					
51	11	24	347	143	236	553	362	424	236	553	362	424					
52	109	246	0	0	0	49	0	0	0	49	0	0					
53	188	423	0	0	0	85	0	0	0	85	0	0					
54	0	0	87	0	116	139	116	0	116	139	116	0					
55	230	519	368	225	246	732	380	454	246	732	380	454					
56	309	696	0	0	0	139	0	0	0	139	0	0					
57	156	351	0	0	0	70	0	0	0	70	0	0					
58	286	645	0	0	0	129	0	0	0	129	0	0					
59	298	672	0	0	0	134	0	0	0	134	0	0					
60	138	312	413	70	389	703	485	273	389	703	485	273					
61	209	471	0	0	0	94	0	0	0	94	0	0					
62	285	642	8	0	9	140	10	0	9	140	10	0					
63	415	936	0	0	0	187	0	0	0	187	0	0					
64	207	468	0	0	0	94	0	0	0	94	0	0					
65	196	441	1279	1270	768	2585	1314	1712	768	2585	1314	1712					
66	258	582	8	0	9	128	10	0	9	128	10	0					
67	340	768	677	332	633	1312	746	674	633	1312	746	674					
68	130	294	8	0	10	71	10	0	10	71	10	0					
69	180	405	30	12	11	126	30	42	11	126	30	42					
70	225	507	167	117	127	406	183	161	127	406	183	161					
71	173	390	1091	525	489	1789	1097	1490	489	1789	1097	1490					
CITY	11583	27121	16906	14954	10280	34960	17607	22388	10280	34960	17607	22388					
72	463	1284	240	720	0	449	240	720	0	449	240	720					
73	59	132	38	0	50	86	50	0	50	86	50	0					
74	98	222	0	0	0	44	0	0	0	44	0	0					
75	0	0	0	0	0	235	0	0	0	235	0	0					
76	5	12	0	0	0	2	0	0	0	2	0	0					
77	1386	3126	856	434	449	2011	886	1058	449	2011	886	1058					
78	713	1608	0	0	0	322	0	0	0	322	0	0					
79	0	0	0	0	0	0	0	0	0	0	0	0					
80	0	0	63	0	0	28	0	0	0	28	0	0					
81	620	1398	32	0	56	329	38	0	56	329	38	0					
82	1156	2607	39	0	52	584	52	0	52	584	52	0					
83	0	1263	0	0	0	253	0	0	0	253	0	0					
84																	

[The following text is a dense, continuous block of characters and symbols, likely representing a corrupted or heavily redacted document. It contains no legible words or phrases.]

INPUT FILE NAME ----- RTABIN

FILE CHARACTERISTICS

USER FILE IDENTIFICATION - 1995TRIP

FILE HEADER -----

SEDONA AREA TRANSPORTATION MODEL
1995 TRIP TABLE

GENERATING FUNCTION ----- MATRIX UPDATE

TYPE OF FILE ----- VOLUME

GENERATION FILE NAME ----- UPDOUT

GENERATION DATE ----- 09OCT95

GENERATION TIME ----- 10:08:19

CURRENT DATE ----- 09OCT95

CURRENT TIME ----- 10:08:19

FILE SIZE ----- MAXIMUM ZONE = 89

MAXIMUM TABLE NO. = 1

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XX XX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XX XX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XX XX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
XX XX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
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XXXXXXXXXX XX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX

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XXXXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXX
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*****
MATRIX REPORTS
*****
SEDONA AREA TRANSPORTATION MODEL
1995 TRIP TABLE
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FILE CHARACTERISTICS

USER FILE IDENTIFICATION - 1995TRIP

FILE HEADER ----- SEDONA AREA TRANSPORTATION MODEL
1995 TRIP TABLE

GENERATING FUNCTION ----- MATRIX UPDATE

TYPE OF FILE ----- VOLUME

GENERATION FILE NAME ----- UPDOUT

GENERATION DATE ----- 09OCT95

GENERATION TIME ----- 10:08:19

FILE SIZE ----- MAXIMUM ZONE = 89

MAXIMUM TABLE NO. = 1

CURRENT DATE ----- 09OCT95

CURRENT TIME ----- 10:08:19

SEDONA AREA TRANSPORTATION MODEL
1995 TRIP TABLE

PAGE NO. 1
DATE 09OCT95
TIME 10:08:19

ORIGIN ZONE	1	PURPOSE	1	90	TOTAL	ORIG/PROD	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1	2	1	0	0	1	1	0	0	0	1	2	10
11	11	0	6	0	0	19	0	2	1	3	0	2	20
21	21	0	0	1	1	0	0	0	2	4	0	0	30
31	31	1	0	1	1	0	0	0	0	0	0	0	40
41	41	0	1	0	0	1	1	1	0	0	0	0	50
51	51	1	0	1	1	1	1	0	0	0	0	0	60
61	61	0	0	1	0	8	1	0	5	0	2	3	70
71	71	4	0	1	0	1	0	0	0	1	0	2	80
81	81	0	0	0	0	0	0	0	0	1	0	0	

ORIGIN ZONE	2	PURPOSE	1	95 TOTAL ORIG/PROD									
		-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE	
1	1	1	1	1	0	1	1	0	0	2	1	10	
11	11	0	6	1	0	7	4	0	6	0	2	20	
21	21	0	1	1	1	0	0	2	3	1	0	30	
31	31	2	0	0	1	0	0	0	0	0	0	40	
41	41	0	0	0	1	2	0	0	0	0	0	50	
51	51	0	0	0	3	2	1	0	0	0	0	60	
61	61	1	0	1	0	2	0	0	1	0	2	70	
71	71	4	1	0	0	9	1	8	1	1	2	80	
81	81	0	1	0	0	0	0	0	2	0	0		

ORIGIN ZONE	3	PURPOSE	1	125	TOTAL	ORIG/PROD	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1	1	1	4	0	0	0	0	0	1	0	0	2	1	10
11	11	8	1	1	0	0	0	1	12	4	1	5	0	1	20
21	3	0	1	1	1	1	0	0	1	0	3	0	1	0	30
31	3	0	1	0	0	0	0	0	0	0	0	0	0	0	40
41	1	1	0	0	6	0	0	0	2	0	0	0	0	0	50
51	1	0	1	1	1	1	1	1	2	0	0	1	0	3	60
61	0	0	1	1	1	0	0	1	13	0	0	0	1	4	70
71	5	1	1	1	0	0	1	1	1	0	0	0	1	0	80
81	1	0	1	1	1	1	0	0	0	0	0	2	0	0	

ORIGIN ZONE	4	PURPOSE	1	179	TOTAL	ORIG/PROD						
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE	
1	0	1	0	5	0	1	0	1	3	4	10	
11	1	11	1	0	8	6	1	10	0	2	20	
21	2	1	2	2	1	0	3	8	1	0	30	

UAG - URBAN/SYS
TRANPLAN SYSTEM
VERSION 8.0

SEDONA AREA TRANSPORTATION MODEL
1995 TRIP TABLE

PAGE NO. 2
DATE 09OCT95
TIME 10:08:19

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
31	5	0	0	2	0	0	0	0	0	1	40
41	0	0	1	7	4	2	0	0	0	0	50
51	2	0	1	0	4	1	0	1	0	4	60
61	0	1	1	1	17	1	18	1	2	4	70
71	9	3	2	1	2	0	0	1	0	0	80
81	0	0	0	1	0	0	0	4	0	0	

ORIGIN ZONE 5 PURPOSE 1 96 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	1	0	1	1	0	0	3	2	10
11	0	7	0	1	3	3	0	3	0	1	20
21	1	0	2	1	0	0	1	0	0	0	30
31	3	0	0	0	0	0	0	0	0	0	40
41	0	1	0	2	2	1	1	0	0	0	50
51	1	0	0	0	2	0	0	1	0	2	60
61	1	0	3	0	6	1	9	1	2	4	70
71	4	2	1	0	3	0	0	0	0	0	80
81	1	0	1	0	0	0	1	4	1	0	

ORIGIN ZONE 6 PURPOSE 1 130 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	1	1	1	1	2	0	0	4	1	10
11	2	1	2	2	5	3	2	5	0	1	20
21	1	1	0	1	1	1	0	3	1	0	30
31	2	0	0	3	0	0	0	0	1	0	40
41	0	1	0	0	2	1	0	1	0	0	50
51	2	0	0	0	13	1	0	0	1	2	60
61	0	2	2	1	2	1	12	2	2	3	70
71	5	3	0	1	0	0	0	1	0	0	80
81	0	1	1	0	0	0	1	5	1	0	

ORIGIN ZONE 7 PURPOSE 1 14 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	0	0	0	0	0	1	0	10
11	0	1	0	1	0	1	0	1	0	0	20
21	0	0	0	0	0	0	0	0	0	0	30
31	1	0	0	0	0	0	0	0	0	0	40
41	0	0	0	1	0	1	0	0	0	1	50
51	0	0	0	0	0	0	0	0	0	0	60
61	0	0	0	0	1	0	1	0	0	0	70
71	0	0	0	0	0	0	1	0	0	0	80
	1	1	0	0	0	0	0	0	0	0	

UAG - URBAN/SYS
TRANPLAN SYSTEM
VERSION 8.0

SEDONA AREA TRANSPORTATION MODEL
1995 TRIP TABLE

PAGE NO. 3
DATE 09OCT95
TIME 10:08:19

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

81

ORIGIN ZONE 8 PURPOSE 1 32 TOTAL ORIG/PROD

TO ZONE

-1- 0 0 0 0 0 0 1 0 0
-2- 0 2 0 1 0 0 0 0 1
-3- 0 0 0 0 0 0 0 0 0
-4- 0 0 0 0 0 0 0 0 0
-5- 0 0 0 0 0 0 0 0 0
-6- 0 0 0 0 0 0 0 0 0
-7- 0 0 0 0 0 0 0 0 0
-8- 0 0 0 0 0 0 0 0 0
-9- 0 0 0 0 0 0 0 0 0
-0- 2 1 0 0 0 0 0 0
TO ZONE 10 20 30 50 60 70 80

ORIGIN ZONE 9 PURPOSE 1 445 TOTAL ORIG/PROD

TO ZONE

-1- 1 1 2 3 3 2 1 1 17
-2- 1 36 4 4 16 13 3 1 5
-3- 1 1 3 4 2 0 0 1 20
-4- 5 1 2 4 0 0 0 0 0
-5- 8 0 0 0 0 0 0 0 0
-6- 4 1 1 11 2 3 4 0 0
-7- 2 0 2 7 5 3 2 1 8
-8- 3 4 7 3 39 10 0 22
-9- 14 13 3 0 10 0 0 3
-0- 3 3 0 2 0 0 0 0
TO ZONE 10 20 30 40 50 60 70 80

ORIGIN ZONE 10 PURPOSE 1 563 TOTAL ORIG/PROD

TO ZONE

-1- 1 2 1 4 2 2 1 1 20
-2- 11 39 2 6 25 16 4 26
-3- 21 2 6 1 1 1 12 17
-4- 31 0 3 3 0 1 4 4
-5- 41 0 0 15 8 5 1 1
-6- 51 1 1 2 2 2 1 1
-7- 61 3 3 4 45 5 60 2
-8- 71 25 5 2 10 0 2 22
-9- 81 2 2 2 10 0 4 4
-0- 10 20 30 40 50 60 70 80

ORIGIN ZONE 11 PURPOSE 1 39 TOTAL ORIG/PROD

TO ZONE

-1- 0 0 0 1 0 1 0 0 2
-2- 0 0 0 1 0 1 0 0 10
-3- 0 0 0 0 0 0 0 0 0
-4- 0 0 0 0 0 0 0 0 0
-5- 0 0 0 0 0 0 0 0 0
-6- 0 0 0 0 0 0 0 0 0
-7- 0 0 0 0 0 0 0 0 0
-8- 0 0 0 0 0 0 0 0 0
-9- 0 0 0 0 0 0 0 0 0
-0- 2 2 0 0 0 0 0 10

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
11	0	3	0	0	1	2	0	1	1	0	20
21	0	0	1	1	0	0	1	1	0	0	30
31	1	0	0	1	0	0	0	0	0	0	40
41	0	0	0	1	1	1	0	0	0	0	50
51	0	0	0	0	1	0	0	0	0	1	60
61	0	0	1	0	4	0	3	0	1	1	70
71	1	1	1	0	0	0	1	0	0	0	80
81	0	0	0	0	0	0	0	1	0	0	

ORIGIN ZONE 12 PURPOSE 1 2781 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	7	6	8	11	8	6	1	3	36	38	10
11	4	18	43	1	81	93	35	105	13	41	20
21	38	17	31	35	16	3	43	70	16	1	30
31	53	3	5	17	3	3	2	1	4	7	40
41	18	6	7	72	27	25	7	5	2	1	50
51	26	8	10	8	60	27	12	21	25	58	60
61	24	40	68	55	279	46	184	19	21	68	70
71	158	56	12	8	46	0	25	13	0	2	80
81	16	20	10	14	0	4	45	164	33		

ORIGIN ZONE 13 PURPOSE 1 450 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	1	1	1	0	1	0	1	4	6	10
11	0	43	9	0	8	36	4	26	2	5	20
21	6	1	4	5	2	1	11	16	2	0	30
31	11	0	1	2	0	0	0	0	0	1	40
41	0	1	2	14	8	4	1	0	0	0	50
51	7	1	1	2	9	2	1	2	1	15	60
61	2	2	5	3	74	3	26	2	2	8	70
71	24	3	1	0	2	0	0	1	0	0	80
81	1	1	0	1	0	0	2	4	1		

ORIGIN ZONE 14 PURPOSE 1 23 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	1	0	0	0	0	0	1	10
11	0	1	0	0	1	3	0	2	0	1	20
21	0	0	0	1	0	0	1	0	1	0	30
31	0	0	0	0	0	1	0	0	0	0	40
41	0	0	0	0	0	1	0	0	0	0	50
51	0	0	0	1	0	1	0	0	0	0	60
61	0	0	0	1	0	1	0	0	0	0	70
71	0	0	0	1	0	1	0	0	0	0	80
81	0	0	0	0	0	0	0	0	0	1	60

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TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

61 0 0 0 3 0 2 0 0 0 70
71 1 0 0 0 0 0 0 0 0 80

ORIGIN ZONE 15 PURPOSE 1 1490 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 19 11 8 3 5 1 1 17 25 10
11 81 7 26 47 29 1 3 42 13 20
21 1 5 10 6 1 0 28 3 0 30
31 33 2 2 2 0 2 2 48 0 40
41 15 3 3 19 11 2 2 3 2 50
51 13 2 3 18 7 2 5 1 1 60
61 3 9 17 6 110 9 14 15 20 70
71 52 49 6 29 0 17 9 24 1 70
81 14 13 6 12 0 45 211 0 1 80

ORIGIN ZONE 16 PURPOSE 1 1565 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 3 5 6 3 4 1 0 13 15 10
11 2 36 3 29 11 48 80 11 21 20
21 22 18 16 14 3 31 39 8 2 30
31 31 3 9 1 2 2 2 3 4 40
41 9 4 39 22 4 4 4 2 1 50
51 13 7 4 33 13 8 12 15 47 60
61 10 29 18 42 15 66 7 9 25 70
71 82 5 5 27 0 16 10 0 1 80
81 14 8 10 0 1 29 85 20

ORIGIN ZONE 17 PURPOSE 1 716 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 1 0 1 0 1 0 1 3 4 10
11 1 35 4 8 48 18 92 3 18 20
21 12 3 3 4 2 19 36 4 1 30
31 17 1 2 1 0 0 0 1 0 40
41 2 2 4 15 8 1 1 0 1 50
51 14 1 3 17 5 2 5 6 32 60
61 2 4 4 59 4 24 2 8 0 70
71 50 1 1 3 0 3 2 0 0 80
81 2 2 1 0 1 3 9 2

ORIGIN ZONE 18 PURPOSE 1 2375 TOTAL ORIG/PROD

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	4	5	6	9	3	5	0	1	15	26	10
11	1	106	26	2	41	81	92	13	17	58	20
21	34	25	27	37	23	4	43	73	19	2	30
31	44	3	7	14	3	4	2	2	5	7	40
41	20	6	6	80	29	21	10	8	3	1	50
51	30	8	15	8	54	27	14	32	37	70	60
61	23	28	47	21	164	20	109	9	17	29	70
71	133	37	5	6	33	0	27	17	0	1	80
81	19	21	10	15	0	5	42	133	38		

ORIGIN ZONE 19 PURPOSE 1 290 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	1	0	0	0	1	1	1	10
11	1	13	2	0	3	11	3	17	5	10	20
21	5	3	4	6	3	0	8	17	3	0	30
31	7	1	1	2	0	0	1	0	0	0	40
41	2	1	2	15	7	4	1	0	0	0	50
51	7	1	2	2	8	3	0	4	2	9	60
61	1	2	3	0	21	1	12	1	1	2	70
71	26	3	1	0	2	0	0	1	0	0	80
81	1	1	0	2	0	1	2	5	1		

ORIGIN ZONE 20 PURPOSE 1 955 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	2	2	1	2	1	1	0	1	5	5	10
11	0	41	5	0	13	20	18	57	10	3	20
21	20	12	17	18	10	2	28	51	6	1	30
31	26	2	2	8	1	0	1	0	2	2	40
41	5	4	5	42	19	11	2	4	1	1	50
51	20	3	4	8	33	10	6	16	7	33	60
61	4	8	9	5	65	5	28	3	2	9	70
71	92	8	3	1	8	1	7	5	0	0	80
81	4	6	2	5	0	1	10	25	9		

ORIGIN ZONE 21 PURPOSE 1 908 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	3	2	0	2	0	1	4	7	10
11	0	38	7	0	10	22	12	34	6	20	20
21	2	14	23	17	12	1	23	40	7	2	30
31	29	2	5	9	1	2	0	1	1	3	40
41	7	4	5	36	23	14	5	3	2	0	50

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TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

51 18 5 7 30 14 8 11 9 20 60
61 6 10 11 58 7 28 3 4 6 70
71 49 13 2 9 0 9 7 0 1 80
81 7 9 5 4 0 14 35 14

ORIGIN ZONE 22 PURPOSE 1 458 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 0 1 0 0 1 0 0 1 2 10
11 0 1 0 5 10 3 25 3 12 20
21 14 17 11 6 1 18 35 3 0 30
31 17 11 1 3 1 1 1 0 1 40
41 2 2 4 28 12 1 1 0 1 50
51 14 1 4 4 20 1 4 2 8 60
61 2 2 5 0 28 1 1 1 4 70
71 21 3 0 1 3 0 1 1 0 80
81 3 2 1 2 0 1 9 4

ORIGIN ZONE 23 PURPOSE 1 790 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 1 1 2 2 0 0 0 3 6 10
11 0 4 0 8 18 9 27 5 16 20
21 24 11 21 15 2 25 46 8 1 30
31 21 18 37 40 1 1 4 2 2 40
41 8 3 7 16 23 4 9 1 1 50
51 22 4 7 32 5 5 3 6 15 60
61 5 2 4 6 32 9 3 2 6 70
71 39 2 1 1 6 20 5 0 1 80
81 6 8 3 5 0 13 32 18

ORIGIN ZONE 24 PURPOSE 1 1304 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 2 1 2 26 16 0 1 4 6 10
11 1 5 22 179 13 11 37 5 18 20
21 17 35 5 5 2 40 66 16 2 30
31 40 2 11 2 1 1 4 2 4 40
41 18 4 73 25 18 5 8 2 0 50
51 18 4 6 29 9 5 3 6 18 60
61 4 8 9 62 5 10 9 3 1 70
71 58 18 2 12 2 16 3 0 1 80
81 11 13 5 11 3 34 69 31

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ORIGIN ZONE	25	PURPOSE	1	756	TOTAL	ORIG/PROD	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1	-1-	0	1	-3-	0	1	0	0	2	2	10
11	1	1	1	1	0	14	4	0	23	3	10	20
21	21	12	16	6	19	6	62	1	120	8	1	30
31	31	42	6	1	10	0	1	0	0	0	2	40
41	41	2	6	38	79	20	3	3	3	2	2	50
51	51	21	1	17	4	2	1	1	3	2	13	60
61	61	1	2	26	1	3	13	1	1	2	4	70
71	71	28	2	0	0	0	3	3	3	2	0	80
81	81	3	2	0	4	0	3	3	6	3	0	

ORIGIN ZONE	26	PURPOSE	1	187	TOTAL	ORIG/PROD	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1											
11	1	0	0				1	0	0	0	1	10
21	1	0	1				3	2	3	0	2	20
31	1	0	1				2	1	2	5	1	30
41	1	8	2				0	1	0	1	2	40
51	1	1	2				4	2	1	0	0	50
61	1	1	1				1	2	1	1	1	60
71	1	1	2				0	3	2	1	1	70
81	1	2	3				2	5	3	0	1	80

ORIGIN ZONE	27	PURPOSE 1		2882 TOTAL ORIG/PROD										-0-	TO ZONE
		-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-					
TO ZONE	1	2	2	3	3	1	2	0	0	6	13	10			
11	0	43	11	1	28	32	19	43	8	28	20	30			
21	23	18	25	40	62	11	171	276	78	11	25	40			
31	182	14	22	56	10	13	10	4	14	10	1	50			
41	59	32	15	179	92	69	27	27	10	1	24	60			
51	19	8	12	4	37	17	8	15	8	13	13	70			
61	11	16	16	8	67	8	32	37	0	5	80				
71	62	26	4	35	23	0	58	105	142						
81	35	49	25	0	17	91									

ORIGIN ZONE	28	PURPOSE	1	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1	4	3			5	8	2	4	0	2	11	17	10
	11	1	70			16	1	48	39	36	74	16	51	20
	21	40	35			45	67	120	21	276	437	143	13	30

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
31	301	38	40	96	17	24	18	10	25	49	40
41	105	61	20	289	150	120	51	35	19	3	50
51	30	25	33	5	62	33	15	31	23	38	60
61	15	26	33	17	109	17	55	9	12	22	70
71	105	48	7	8	42	0	110	72	0	11	80
81	64	92	49	61	0	29	158	180	177		

ORIGIN ZONE 29 PURPOSE 1 872 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	1	1	0	0	0	0	1	2	10
11	0	16	1	1	9	8	4	19	3	6	20
21	8	3	8	16	8	5	79	143	47	5	30
31	59	3	4	16	0	2	0	1	1	2	40
41	12	6	9	79	31	18	5	3	1	1	50
51	8	2	2	1	13	2	1	1	2	10	60
61	1	1	3	0	25	1	13	1	1	3	70
71	23	5	0	0	4	0	11	4	0	1	80
81	5	5	3	8	0	2	17	25	20		

ORIGIN ZONE 30 PURPOSE 1 95 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	1	0	0	0	0	0	1	10
11	0	1	1	0	0	2	0	2	0	1	20
21	2	0	1	2	0	1	10	13	5	1	30
31	7	0	1	1	1	0	0	0	1	0	40
41	0	1	1	10	5	3	1	1	0	0	50
51	0	0	0	0	3	0	0	1	0	1	60
61	1	0	0	0	3	0	1	0	0	1	70
71	2	0	0	0	1	0	0	0	0	1	80
81	1	1	0	1	0	0	0	1	0	0	

ORIGIN ZONE 31 PURPOSE 1 3945 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	3	3	5	2	3	1	0	7	12	10
11	0	53	11	0	33	31	17	44	7	27	20
21	29	17	22	40	42	9	182	301	59	7	30
31	528	48	64	140	22	28	21	11	30	52	40
41	130	37	13	212	79	56	29	22	9	1	50
51	24	7	16	6	35	11	9	15	14	24	60
61	9	13	20	8	65	4	42	4	10	13	70
71	63	39	4	6	26	1	107	66	0	12	80

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-0- TO ZONE

-9- 134

-8- 163

-7- 159

-6- 20

-5- 0

-4- 72

-3- 45

-2- 100

-1- 62

TO ZONE

81

ORIGIN ZONE 32 PURPOSE 1 248 TOTAL ORIG/PROD

-0- TO ZONE

-9- 0

-8- 0

-7- 1

-6- 0

-5- 0

-4- 0

-3- 0

-2- 0

-1- 0

TO ZONE

1

10

20

30

40

50

60

70

80

0

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0

ORIGIN ZONE 33 PURPOSE 1 403 TOTAL ORIG/PROD

-0- TO ZONE

-9- 0

-8- 0

-7- 0

-6- 0

-5- 0

-4- 0

-3- 0

-2- 0

-1- 0

TO ZONE

1

10

20

30

40

50

60

70

80

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ORIGIN ZONE 34 PURPOSE 1 1493 TOTAL ORIG/PROD

-0- TO ZONE

-9- 0

-8- 0

-7- 0

-6- 0

-5- 0

-4- 0

-3- 0

-2- 0

-1- 0

TO ZONE

1

10

20

30

40

50

60

70

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ORIGIN ZONE 35 PURPOSE 1 190 TOTAL ORIG/PROD

-0- TO ZONE

-9- 0

-8- 0

-7- 0

-6- 0

-5- 0

-4- 0

-3- 0

-2- 0

-1- 0

TO ZONE

1

10

20

30

40

50

60

70

80

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22

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23

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34

43

0

3

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	1	0	0	0	0	0	0	0	0	10
11	0	3	1	0	1	1	1	2	0	1	20
21	1	1	1	1	1	0	11	17	0	1	30
31	21	1	2	20	4	2	2	1	4	6	40
41	11	1	2	12	5	3	0	0	0	0	50
51	3	0	0	0	1	0	0	0	0	2	60
61	0	1	1	0	4	0	1	0	0	0	70
71	3	0	0	0	0	0	5	3	0	0	80
81	3	3	2	6	0	0	5	4	1	0	

ORIGIN ZONE 36 PURPOSE 1 199 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	0	0	0	0	0	1	1	10
11	0	2	0	1	1	2	13	23	0	1	20
21	2	0	1	2	0	0	0	0	2	0	30
31	29	0	2	27	2	4	1	1	2	3	40
41	5	3	2	14	7	4	1	0	0	0	50
51	2	0	0	1	1	1	0	0	1	1	60
61	1	0	0	0	4	0	3	0	0	1	70
71	3	0	0	0	1	0	3	1	0	1	80
81	1	2	1	4	0	0	2	1	1	1	

ORIGIN ZONE 37 PURPOSE 1 156 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	0	0	0	0	0	1	0	10
11	0	2	0	1	1	1	0	2	1	1	20
21	0	1	1	1	0	0	10	19	0	1	30
31	21	1	2	15	2	4	2	0	3	0	40
41	7	1	2	11	4	4	1	0	0	0	50
51	1	0	0	1	1	0	0	0	1	1	60
61	0	0	0	0	4	0	0	0	1	0	70
71	2	1	0	0	0	0	2	2	0	0	80
81	1	2	1	5	0	0	1	1	0	0	

ORIGIN ZONE 38 PURPOSE 1 90 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	0	0	0	0	0	1	0	10
11	0	2	0	0	0	2	0	2	0	1	20
21	0	0	0	0	0	0	0	0	0	0	30
31	10	0	1	5	0	1	5	9	1	0	40
41	4	0	1	7	3	2	0	4	0	1	50

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
51	0	0	0	1	1	0	0	0	1	0	60
61	0	0	0	0	4	0	1	0	0	0	70
71	2	0	0	0	0	0	1	1	0	1	80
81	1	1	1	3	0	0	1	1	0		

ORIGIN ZONE 39 PURPOSE 1 272 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	0	0	1	0	0	0	0	10
11	1	3	0	0	3	3	0	5	0	2	20
21	1	1	2	2	1	1	13	26	0	1	30
31	31	1	3	22	4	2	3	1	11	8	40
41	14	2	3	17	9	6	0	1	0	0	50
51	3	0	0	0	3	1	0	1	0	2	60
61	0	0	1	0	6	1	0	1	0	0	70
71	6	0	0	0	1	0	2	3	0	1	80
81	3	5	2	12	0	0	4	2	0		

ORIGIN ZONE 40 PURPOSE 1 456 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	1	0	0	0	0	1	0	10
11	0	7	1	0	3	4	0	7	0	2	20
21	3	1	2	4	1	2	25	49	2	0	30
31	52	1	5	41	6	3	4	2	9	25	40
41	37	4	3	30	13	8	1	1	0	1	50
51	4	0	1	1	4	0	0	0	1	3	60
61	1	0	0	0	9	0	6	0	0	1	70
71	6	1	0	0	0	0	11	6	0	2	80
81	5	6	3	13	0	0	7	2	2		

ORIGIN ZONE 41 PURPOSE 1 1591 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	1	0	0	0	0	0	2	2	10
11	0	18	0	0	15	9	0	0	1	6	20
21	7	2	8	18	3	2	58	105	12	0	30
31	130	4	10	89	11	5	7	4	14	37	40
41	454	5	7	78	29	18	1	1	1	0	50
51	10	1	1	2	12	0	0	1	1	8	60
61	0	2	1	0	36	0	13	1	1	4	70
71	22	7	1	0	1	1	35	10	0	3	80
81	11	15	7	52	0	3	76	38	17		

ORIGIN ZONE	42	PURPOSE	1	413 TOTAL ORIG/PROD	-7-	-8-	-9-	-0-	TO ZONE			
TO ZONE	1	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	1	0	1	0	1	0	0	1	1	1	10
11	11	0	6	1	0	3	5	2	6	1	4	20
21	21	3	2	1	4	5	2	32	61	6	1	30
31	31	37	2	4	9	0	3	1	0	2	4	40
41	41	5	12	3	33	14	9	3	2	1	0	50
51	51	4	1	1	1	5	1	2	1	2	4	60
61	61	1	1	2	0	9	0	7	0	1	1	70
71	71	7	3	0	1	3	0	6	4	0	1	80
81	81	4	6	3	4	0	3	8	10	9		
ORIGIN ZONE	43	PURPOSE	1	431 TOTAL ORIG/PROD	-7-	-8-	-9-	-0-	TO ZONE			
TO ZONE	1	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	1	0	1	1	0	1	0	0	0	3	10
11	11	0	6	3	0	2	4	4	6	2	5	20
21	21	5	3	4	10	2	2	15	20	10	1	30
31	31	13	3	3	3	2	2	2	0	3	3	40
41	41	7	4	3	31	14	12	10	7	3	0	50
51	51	3	2	3	1	5	5	2	4	3	2	60
61	61	2	3	4	3	7	3	6	0	2	2	70
71	71	7	7	0	1	6	1	13	8	0	1	80
81	81	8	9	5	5	0	2	14	19	24		
ORIGIN ZONE	44	PURPOSE	1	4818 TOTAL ORIG/PROD	-7-	-8-	-9-	-0-	TO ZONE			
TO ZONE	1	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	4	2	6	7	2	3	0	1	12	15	10
11	11	1	72	13	1	52	39	31	80	15	42	20
21	21	36	28	40	73	80	12	180	289	10	30	30
31	31	212	23	31	71	12	14	11	79	17	30	40
41	41	77	33	31	66	349	257	93	94	31	3	50
51	51	33	13	20	6	59	26	12	23	19	42	60
61	61	13	22	26	13	113	14	56	7	11	21	70
71	71	110	50	5	8	43	0	86	52	0	7	80
81	81	57	75	36	60	0	19	143	205	634		
ORIGIN ZONE	45	PURPOSE	1	2377 TOTAL ORIG/PROD	-7-	-8-	-9-	-0-	TO ZONE			
TO ZONE	1	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	2	2	3	4	2	2	0	1	4	9	10
11	11	0	28	8	0	19	22	15	29	7	19	20
21	21	23	12	16	25	37	5	92	150	31	5	30

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
31	78	12	9	30	5	7	5	3	10	13	40
41	30	14	14	349	140	106	71	43	14	2	50
51	16	6	9	3	24	13	6	11	12	17	60
61	7	11	17	7	41	6	29	3	6	10	70
71	39	25	2	4	20	0	37	24	0	3	80
81	30	36	17	23	0	8	61	90	177		

ORIGIN ZONE 46 PURPOSE 1 1555 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	2	1	1	1	1	1	2	5	10
11	1	24	5	0	11	13	9	20	4	11	20
21	15	7	10	18	20	4	69	119	19	2	30
31	56	6	6	19	2	5	3	2	6	8	40
41	18	9	12	257	106	74	42	25	14	1	50
51	11	4	6	3	15	7	4	6	5	11	60
61	5	5	10	3	28	3	21	3	3	5	70
71	25	12	2	2	11	0	21	13	0	2	80
81	16	19	9	14	0	6	32	49	97		

ORIGIN ZONE 47 PURPOSE 1 490 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	0	0	0	0	0	0	1	1	10
11	0	7	1	0	2	5	1	10	1	3	20
21	4	1	5	5	3	2	28	51	4	1	30
31	30	0	3	5	1	0	1	0	0	1	40
41	1	3	10	93	71	41	10	4	2	0	50
51	5	0	1	0	6	1	1	0	1	5	60
61	1	0	1	0	11	1	5	0	0	3	70
71	7	2	1	0	2	0	2	1	0	1	80
81	2	2	1	2	0	0	2	4	5		

ORIGIN ZONE 48 PURPOSE 1 392 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	1	0	0	0	0	1	0	10
11	0	5	0	0	2	4	1	8	0	4	20
21	3	1	0	4	3	1	27	36	3	1	30
31	21	1	2	5	0	0	0	0	0	1	40
41	2	2	7	95	42	25	4	10	1	0	50
51	4	0	1	1	5	1	1	1	0	4	60
61	0	1	1	1	8	0	5	0	2	2	70
71	7	1	1	0	1	0	2	1	0	0	80

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
81	2	1	1	3	0	0	2	3	4		
ORIGIN ZONE 49	PURPOSE 1		161 TOTAL ORIG/PROD								
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	1	0	0	0	0	0	1	0	10
11	0	2	0	0	2	2	0	3	0	1	20
21	0	0	1	2	0	0	10	19	1	0	30
31	9	0	1	3	0	0	0	0	0	0	40
41	0	1	3	30	15	14	2	1	3	0	50
51	3	0	0	1	4	0	2	1	0	1	60
61	0	1	1	0	1	0	0	0	1	0	70
71	3	1	0	0	1	0	0	1	0	0	80
81	0	1	1	1	0	0	2	1	2		
ORIGIN ZONE 50	PURPOSE 1		48 TOTAL ORIG/PROD								
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	1	0	0	0	0	0	0	0	0	10
11	0	1	1	0	1	0	0	1	0	1	20
21	0	1	1	0	3	0	1	2	1	0	30
31	0	1	0	0	0	0	0	0	1	0	40
41	2	0	0	3	2	1	0	0	0	0	50
51	0	0	0	0	1	1	0	1	1	1	60
61	1	0	0	0	1	1	0	0	1	1	70
71	1	1	0	0	0	0	1	1	0	0	80
81	0	1	0	1	0	1	1	2	1		
ORIGIN ZONE 51	PURPOSE 1		893 TOTAL ORIG/PROD								
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	1	0	0	0	0	0	0	0	0	10
11	0	1	1	0	1	0	0	1	0	1	20
21	0	1	1	0	3	0	1	2	1	0	30
31	0	1	0	0	0	0	0	0	1	0	40
41	0	0	0	3	2	1	0	0	0	0	50
51	1	0	0	0	1	1	0	1	1	1	60
61	0	1	0	0	1	1	0	0	1	1	70
71	1	1	0	0	0	0	1	1	0	0	80
81	0	1	0	1	0	1	1	2	1		
ORIGIN ZONE 52	PURPOSE 1		175 TOTAL ORIG/PROD								
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	1	1	2	1	2	1	0	3	6	10
11	0	26	7	0	13	14	14	30	7	20	20
21	18	14	22	18	20	1	19	30	8	1	30
31	24	3	3	8	3	2	1	1	2	4	40
41	10	4	3	33	16	12	4	4	3	0	50
51	22	6	11	3	26	10	9	13	10	17	60
61	4	8	11	6	37	5	19	3	3	8	70
71	45	13	2	2	11	0	12	8	0	1	80
81	9	11	5	8	0	2	22	49	22		

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	0	1	0	0	0	0	1	10
11	0	8	0	0	2	4	1	8	1	2	20
21	5	2	3	5	1	1	1	15	2	0	30
31	7	0	1	2	0	0	0	0	0	0	40
41	1	1	2	13	6	3	1	0	0	0	50
51	6	2	2	4	8	0	1	1	1	4	60
61	1	1	1	0	11	1	5	0	1	2	70
71	9	1	0	0	0	0	1	0	0	1	80
81	0	0	0	2	0	0	0	2	0	0	

ORIGIN ZONE 53 PURPOSE 1 301 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	1	0	0	0	0	0	2	1	10
11	0	11	8	6	3	7	3	15	2	4	20
21	8	1	2	0	2	1	12	25	1	0	30
31	16	0	2	3	0	0	0	0	0	1	40
41	1	2	3	20	9	6	1	0	1	0	50
51	11	2	18	4	9	2	1	1	1	3	60
61	1	1	0	0	19	1	9	0	0	0	70
71	14	1	0	0	2	0	1	1	0	3	80
81	2	1	1	1	0	0	1	4	0	0	

ORIGIN ZONE 54 PURPOSE 1 238 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	1	1	0	0	0	1	1	2	10
11	0	7	2	0	3	4	3	9	2	7	20
21	5	4	4	2	4	0	4	5	2	0	30
31	5	1	1	2	1	0	1	1	0	0	40
41	2	0	1	6	4	3	1	1	1	0	50
51	3	3	4	2	14	4	3	4	3	2	60
61	2	3	3	2	9	3	6	2	1	0	70
71	8	4	1	1	4	0	4	3	0	0	80
81	3	4	2	2	0	0	5	12	4	0	

ORIGIN ZONE 55 PURPOSE 1 1319 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	2	3	3	2	2	0	1	5	8	10
11	1	60	9	1	18	33	17	54	8	33	20
21	30	20	23	29	17	3	36	63	12	3	30
31	35	3	4	10	1	2	1	1	3	4	40
41	12	5	5	60	23	15	7	5	1	1	50

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
51	26	8	9	14	3	20	19	16	12	30	60
61	8	10	17	7	66	6	42	3	6	12	70
71	79	18	3	3	13	1	14	8	0	1	80
81	10	12	5	8	0	4	24	63	24		

ORIGIN ZONE 56 PURPOSE 1 492 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	1	0	1	0	1	0	0	3	2	10
11	0	27	2	0	7	15	5	26	3	10	20
21	14	4	9	9	3	1	17	33	2	1	30
31	20	1	2	3	0	1	0	0	1	0	40
41	1	1	5	25	13	7	1	1	0	1	50
51	10	0	2	4	19	18	2	6	2	15	60
61	2	1	4	1	45	2	18	2	1	4	70
71	35	2	1	1	2	0	1	1	0	0	80
81	1	1	1	2	0	0	2	4	1		

ORIGIN ZONE 57 PURPOSE 1 247 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	0	1	0	0	0	0	1	1	10
11	0	12	1	0	2	8	2	14	1	6	20
21	8	1	5	5	1	0	8	14	1	0	30
31	9	0	2	2	0	0	0	0	0	0	40
41	1	2	2	12	7	4	1	1	0	0	50
51	9	1	1	3	19	2	3	3	1	7	60
61	1	2	1	1	15	0	10	1	0	2	70
71	20	1	0	1	0	0	1	1	0	0	80
81	0	1	1	0	0	0	1	2	1		

ORIGIN ZONE 58 PURPOSE 1 453 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	1	0	1	0	0	0	2	2	10
11	0	21	2	0	4	13	5	33	3	16	20
21	11	4	9	8	3	2	15	31	2	0	30
31	15	1	0	4	0	0	0	0	1	0	40
41	1	1	3	24	10	6	0	1	1	1	50
51	12	1	2	4	17	5	3	6	2	18	60
61	2	1	3	1	34	2	13	0	2	4	70
71	50	1	0	0	2	0	1	0	0	0	80
81	1	1	0	1	0	0	1	3	1		

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ORIGIN ZONE 59		PURPOSE 1		473 TOTAL ORIG/PROD									
TO ZONE		-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE	
1	1	0	1	0	0	1	0	0	0	3	2	10	
11	11	1	25	1	15	5	1	5	37	2	7	20	
21	21	10	2	6	6	2	1	16	23	2	0	30	
31	31	14	0	3	1	0	1	0	1	0	0	40	
41	41	1	1	19	12	12	6	1	0	0	0	50	
51	51	10	1	3	12	1	2	1	2	14	34	60	
61	61	5	7	2	44	25	4	1	1	1	5	70	
71	71	33	1	1	2	1	0	1	1	0	0	80	
81	81	1	1	0	0	2	1	2	4	0	0		
ORIGIN ZONE 60		PURPOSE 1		1290 TOTAL ORIG/PROD									
TO ZONE		-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE	
1	1	3	2	3	4	2	2	1	1	8	10	10	
11	11	1	58	15	0	20	47	32	70	9	32	20	
21	21	20	8	15	18	13	1	24	38	10	1	30	
31	31	24	2	2	7	2	1	2	0	3	3	40	
41	41	8	5	2	43	17	11	5	4	1	1	50	
51	51	17	3	6	3	30	15	7	18	34	3	60	
61	61	21	33	25	12	85	17	41	6	8	16	70	
71	71	71	20	3	3	18	0	14	8	0	0	80	
81	81	12	11	6	8	0	1	22	62	20			
ORIGIN ZONE 61		PURPOSE 1		332 TOTAL ORIG/PROD									
TO ZONE		-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE	
1	1	0	1	0	0	1	0	0	0	3	1	10	
11	11	0	25	2	10	3	10	3	23	2	4	20	
21	21	6	2	4	4	1	0	11	15	1	1	30	
31	31	9	0	1	0	0	0	0	0	0	1	40	
41	41	0	1	2	12	7	5	1	0	0	0	50	
51	51	5	1	1	1	8	2	0	2	5	22	60	
61	61	5	9	9	2	28	5	23	1	1	5	70	
71	71	22	1	2	0	1	0	1	3	0	0	80	
81	81	1	0	0	1	0	0	1					
ORIGIN ZONE 62		PURPOSE 1		559 TOTAL ORIG/PROD									
TO ZONE		-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE	
1	1	1	1	0	1	0	2	0	0	4	4	10	
11	11	0	40	2	1	0	19	0	27	2	7	20	
21	21	10	3	6	8	9	1	15	26	2	0	30	

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
31	13	1	2	3	1	1	0	0	0	0	40
41	2	1	2	22	11	5	1	1	1	0	50
51	8	1	2	3	10	2	2	1	7	32	60
61	9	33	13	3	49	6	40	2	1	9	70
71	35	5	1	1	2	0	1	1	0	0	80
81	1	1	1	3	0	0	2	6	1		

ORIGIN ZONE 63 PURPOSE 1 790 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	0	1	0	3	2	0	0	7	5	10
11	0	68	5	0	16	30	4	47	3	10	20
21	11	4	8	9	4	2	16	33	2	0	30
31	20	1	2	6	0	0	0	0	1	1	40
41	1	2	4	27	16	10	0	1	1	1	50
51	10	1	3	3	17	4	1	3	9	25	60
61	10	12	45	8	81	11	69	1	5	13	70
71	43	3	3	1	3	0	3	1	0	0	80
81	2	2	0	3	0	0	2	6	2		

ORIGIN ZONE 64 PURPOSE 1 385 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	1	0	2	0	1	0	0	3	4	10
11	0	55	3	0	6	18	3	20	1	4	20
21	6	1	4	5	0	2	8	18	0	4	30
31	8	0	1	2	0	0	0	0	0	0	40
41	0	1	2	13	7	3	1	0	0	0	50
51	6	1	0	2	7	1	1	1	3	11	60
61	2	4	8	4	56	4	32	1	2	6	70
71	18	2	1	0	1	0	1	0	0	0	80
81	1	1	1	0	0	0	1	3	0		

ORIGIN ZONE 65 PURPOSE 1 3865 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	8	9	13	17	6	13	1	4	38	45	10
11	4	280	73	3	110	141	59	165	20	66	20
21	58	28	32	63	26	5	66	109	25	3	30
31	64	6	9	21	4	3	4	4	5	9	40
41	35	9	7	113	41	28	11	8	3	1	50
51	37	11	19	9	66	44	15	34	44	85	60
61	28	49	80	56	48	48	197	22	37	73	70
71	252	80	12	11	62	1	40	24	0	2	80

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TO ZONE 81 -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

ORIGIN ZONE 66 PURPOSE 1 434 TOTAL ORIG/PROD

TO ZONE 81 -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

ORIGIN ZONE 67 PURPOSE 1 2424 TOTAL ORIG/PROD

TO ZONE 81 -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

ORIGIN ZONE 68 PURPOSE 1 224 TOTAL ORIG/PROD

TO ZONE 81 -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

ORIGIN ZONE 69 PURPOSE 1 353 TOTAL ORIG/PROD

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	2	0	1	3	2	2	0	0	7	8	10
11	0	21	2	0	15	9	2	17	1	2	20
21	4	1	2	4	2	1	7	12	2	0	30
31	9	0	0	3	0	0	1	0	0	0	40
41	2	0	2	11	6	3	0	1	0	1	50
51	3	0	0	2	6	1	0	1	2	8	60
61	1	1	4	2	37	1	30	3	20	9	70
71	15	7	4	1	3	0	2	1	0	0	80
81	0	1	1	1	0	0	2	14	1		

ORIGIN ZONE 70 PURPOSE 1 811 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	2	2	4	4	3	4	0	0	21	17	10
11	1	68	8	0	24	24	8	29	2	10	20
21	6	4	6	9	4	1	13	21	3	1	30
31	13	1	1	5	0	2	0	0	0	1	40
41	4	1	2	21	10	5	2	2	0	1	50
51	7	2	3	2	11	5	2	4	4	16	60
61	5	8	14	6	73	8	69	9	9	38	70
71	27	19	5	1	16	0	5	3	0	1	80
81	4	4	2	3	0	1	9	41	5		

ORIGIN ZONE 71 PURPOSE 1 2841 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	5	4	5	9	4	4	1	3	14	25	10
11	1	159	24	1	53	82	51	133	26	92	20
21	49	21	39	58	28	5	62	105	22	2	30
31	63	5	7	19	2	3	2	2	6	7	40
41	22	8	7	110	39	25	8	7	4	1	50
51	45	9	14	8	79	35	20	50	33	72	60
61	22	36	42	18	252	26	113	9	15	27	70
71	16	43	8	6	28	0	25	15	0	1	80
81	17	22	10	19	0	5	53	156	58		

ORIGIN ZONE 72 PURPOSE 1 1471 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	1	1	1	3	2	3	1	0	13	11	10
11	0	56	3	0	49	27	3	38	7	7	20
21	13	3	9	18	2	2	27	48	5	1	30
31	38	0	3	10	1	0	1	0	0	0	40
41	7	3	6	50	24	12	2	1	1	0	50

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-0- TO ZONE

-9-

-8-

-7-

-6-

-5-

-4-

-3-

-2-

-1-

TO ZONE

20 60
18 70
0 80

1 7
0 0
4 4

1 2
2 1
74 74

2 70
5 5
11 11

2 3
0 0
0 0

18 79
7 7
0 0

4 2
3 3
6 6

2 4
14 14
1 1

1 4
536 536
1 1

13 1
43 43
2 2

51 61
71 71
81 81

ORIGIN ZONE 73 PURPOSE 1 199 TOTAL ORIG/PROD

-0- TO ZONE

-9-

-8-

-7-

-6-

-5-

-4-

-3-

-2-

-1-

TO ZONE

4 10
3 20
0 30
0 40
0 50
2 60
5 70
0 80

3 1
0 0
0 0
0 0
1 1
1 1
4 4
0 0
1 1

0 4
4 6
0 0
1 1
1 1
1 1
16 16

0 1
1 4
4 0
0 0
0 0
11 11
3 3
3 3

1 5
0 0
0 0
2 2
1 1
0 0
0 0

0 6
0 0
0 0
2 2
13 13
7 7
0 0

3 0
0 0
1 1
6 6
1 1
1 1
0 0

1 1
2 2
0 0
0 0
3 3
11 11
1 1

0 11
11 11
0 0
0 0
0 0
1 1
14 14
1 1

1 1
1 1
2 2
4 4
2 2
2 2
8 8
1 1

1 11
11 21
21 31
31 41
41 51
51 61
61 71
71 81

ORIGIN ZONE 74 PURPOSE 1 156 TOTAL ORIG/PROD

-0- TO ZONE

-9-

-8-

-7-

-6-

-5-

-4-

-3-

-2-

-1-

TO ZONE

1 10
2 20
0 30
0 40
0 50
3 60
2 70
0 80

2 2
0 1
0 0
0 0
0 0
1 1
1 1
0 0
0 0

0 6
8 8
0 0
0 0
0 0
1 1
1 1
2 2

0 1
4 4
0 0
0 0
1 1
10 10
1 1

0 4
0 0
0 0
3 3
0 0
0 0
0 0

1 6
0 0
0 0
4 4
3 3
11 11
2 2
0 0

0 0
0 3
1 7
7 7
1 1
0 0
23 23
1 1

0 1
1 1
1 1
1 1
0 0
1 1
1 1
0 0

1 8
0 0
0 0
1 1
0 0
1 1
2 2
1 1

0 0
2 2
6 6
1 1
2 2
0 0
6 6
1 1

1 11
11 21
21 31
31 41
41 51
51 61
61 71
71 81

ORIGIN ZONE 75 PURPOSE 1 822 TOTAL ORIG/PROD

-0- TO ZONE

-9-

-8-

-7-

-6-

-5-

-4-

-3-

-2-

-1-

TO ZONE

10 10
20 20
30 30
40 40
50 50
60 60
70 70
80 80

10 10
2 4
4 1
0 0
2 2
3 3
2 2
0 0

0 33
42 42
0 0
1 1
2 2
2 2
16 16

1 3
22 22
0 0
2 2
1 1
47 47
3 3
1 1

2 27
2 2
0 0
10 10
2 2
2 2
0 0

2 29
29 29
20 20
13 13
62 62
150 150
0 0

2 0
11 11
43 43
4 4
1 1
2 2
5 5

1 1
7 7
2 2
6 6
2 2
3 3
7 7
0 0

1 47
3 3
1 1
3 3
0 0
3 3
7 7
1 1

1 0
8 8
26 26
11 11
1 1
29 29
0 0

1 11
11 21
21 31
31 41
41 51
51 61
61 71
71 81

ORIGIN ZONE	76	PURPOSE	1	9 TOTAL ORIG/PROD									-0-	TO ZONE
TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE			
11	0	0	0	0	0	1	0	0	0	0	20			
21	0	0	0	0	0	0	1	0	0	0	30			
31	1	0	0	1	0	0	0	0	0	0	40			
41	0	0	1	0	0	0	0	0	0	0	50			
51	0	0	0	0	1	0	0	0	0	0	60			
71	0	0	0	0	0	0	0	0	0	0	80			
81	0	0	1	1	0	0	0	0	0	0				

ORIGIN ZONE	77	PURPOSE	1	4304	TOTAL	ORIG/PROD	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1												
11	0	0	1	0	1	0	0	1	0	0	3	2	10
21	9	25	0	0	17	2	28	16	2	110	0	8	20
31	31	4	17	3	3	58	1	3	11	7	11	0	30
41	107	3	53	5	3	3	1	3	3	2	7	11	40
51	35	6	86	37	2	1	2	21	2	1	1	1	50
61	12	1	4	14	1	1	1	1	1	1	1	14	60
71	1	1	1	40	1	20	1	1	1	1	0	5	70
81	25	5	0	2	1	2238	128	0	275	25	0	2	80
	80	126	458	0	0	275	25	0			7		

ORIGIN ZONE	78	PURPOSE 1	1134 TOTAL ORIG/PROD	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1													
11	1	0	1	0	0	0	0	0	1	0	0	2	2	10
21	1	0	1	0	0	1	10	9	10	2	17	1	4	20
31	1	1	5	3	3	6	33	3	2	37	72	4	0	30
41	1	1	6	3	3	8	52	24	1	2	1	2	6	40
51	1	4	8	0	8	0	3	8	13	2	1	1	0	50
61	1	1	1	0	1	1	1	24	1	1	0	1	8	60
71	1	1	1	1	1	1	1	0	1	12	1	1	2	70
81	1	15	1	1	1	1	1	0	0	129	184	0	1	80
	18	25	16	215	0	0	0	0	0	11	1	0		

ORIGIN ZONE	79	PURPOSE	1	0 TOTAL ORIG/PROD								
ORIGIN ZONE	80	PURPOSE	1	98 TOTAL ORIG/PROD								
TO ZONE		-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1		0	0	0	0	0	0	0	0	1	0	10
11		0	1	0	0	1	2	0	1	0	1	20

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TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
21	1	0	1	1	0	1	5	11	1	0	30
31	12	1	1	8	0	1	0	1	1	2	40
41	3	1	1	7	3	2	0	0	0	0	50
51	1	1	0	0	1	0	0	0	0	0	60
61	0	0	0	0	2	0	2	0	0	1	70
71	1	0	0	0	0	0	2	2	0	2	80
81	1	1	1	6	0	0	1	0	0		

ORIGIN ZONE 81 PURPOSE 1 1082 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	1	1	0	0	1	0	0	2	2	10
11	0	17	1	0	13	14	2	19	1	4	20
21	7	2	6	11	3	2	35	64	5	1	30
31	62	2	5	30	2	2	1	1	3	5	40
41	11	4	8	57	30	16	2	2	0	1	50
51	8	1	2	3	10	1	1	1	1	11	60
61	1	1	2	0	29	1	16	1	0	4	70
71	17	2	0	1	1	0	80	17	0	1	80
81	124	68	23	169	0	1	23	2	1		

ORIGIN ZONE 82 PURPOSE 1 1950 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	1	0	0	1	1	0	0	3	1	10
11	0	20	1	0	14	15	2	21	1	6	20
21	9	2	7	13	2	3	49	92	5	1	30
31	99	6	9	46	3	2	2	1	4	7	40
41	15	0	9	75	36	19	2	2	1	0	50
51	12	0	1	4	12	1	1	1	1	12	60
61	0	1	2	1	30	1	19	1	1	4	70
71	21	1	2	0	1	0	126	25	0	1	80
81	68	457	49	465	0	0	18	1	0		

ORIGIN ZONE 83 PURPOSE 1 893 TOTAL ORIG/PROD

TO ZONE	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
1	0	0	1	0	0	1	0	0	0	1	10
11	0	10	0	0	6	7	1	10	1	2	20
21	5	1	3	5	1	2	25	50	2	1	30
31	45	0	4	23	2	1	1	1	2	3	40
41	7	3	4	36	17	9	1	1	1	0	50
51	5	0	0	5	5	1	0	0	1	6	60
61	0	1	0	1	16	0	9	0	0	2	70

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TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

71 11 0 0 0 1 72 16 0 1 80
81 23 102 264 0 0 6 1 0

ORIGIN ZONE 84 PURPOSE 1 4697 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 0 0 1 0 0 0 0 2 2 10
11 0 14 0 11 11 0 15 2 5 20
21 4 2 11 4 2 35 61 8 1 30
31 7 3 33 6 4 40 3 12 12 40
41 53 4 60 23 14 2 2 1 8 50
51 8 1 2 8 1 1 1 2 1 70
61 1 2 1 24 1 14 0 1 3 80
71 19 6 1 5 1 458 215 0 6
81 169 464 265 2087 2 329 50 12

ORIGIN ZONE 85 PURPOSE 1 0 TOTAL ORIG/PROD

ORIGIN ZONE 86 PURPOSE 1 168 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 0 0 0 0 0 0 0 0 1 10
11 0 0 0 2 1 1 4 1 1 20
21 2 0 0 1 1 17 29 2 0 30
31 20 0 0 1 0 0 0 0 0 40
41 3 3 2 4 0 0 0 0 1 50
51 3 0 2 19 9 5 0 0 1 60
61 0 0 0 0 3 0 0 0 1 70
71 5 1 0 0 8 0 0 0 1 80
81 1 0 0 2 0 0 0 0 0

ORIGIN ZONE 87 PURPOSE 1 3274 TOTAL ORIG/PROD

TO ZONE -1- -2- -3- -4- -5- -6- -7- -8- -9- -0- TO ZONE

1 1 0 1 1 1 0 0 5 4 10
11 0 44 2 0 44 4 42 2 9 20
21 15 3 13 3 29 9 157 17 0 30
31 159 2 11 66 5 2 1 1 7 40
41 76 8 13 143 60 33 2 1 1 50
51 22 1 1 5 25 1 2 22 22 70
61 1 2 2 77 0 2 0 3 9 80
71 52 11 3 0 1 11 650 0 2
81 23 18 6 330 0 275 0 550

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ORIGIN ZONE	88	PURPOSE	1	5528	TOTAL	ORIG/PROD	-6-	-7-	-8-	-9-	-0-	TO ZONE
TO ZONE	1	-1-	2	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-0-	TO ZONE
11	1	1	2	2	3	5	5	0	1	22	22	10
21	11	164	4	4	0	211	84	9	133	5	25	20
31	21	9	32	69	6	6	6	105	181	24	1	30
41	31	163	2	44	12	1	1	1	0	2	2	40
51	41	10	19	206	3	48	4	4	3	1	2	50
61	51	1	4	11	90	2	4	2	3	4	62	60
71	61	49	7	3	63	5	5	169	4	13	41	70
81	71	156	16	2	261	0	0	25	0	0	0	80
	81	2	0	50	17	0	0	650	0	2000		

ORIGIN ZONE	89	PURPOSE 1		4490 TOTAL ORIG/PROD									
		-1	-2	-3	-4	-5	-6	-7	-8	-9	-0-	TO ZONE	
TO ZONE	1	0	0	1	0	0	1	0	0	3	1	10	
11	11	0	33	1	0	21	21	0	38	1	9	20	
21	21	14	4	18	31	3	7	142	177	20	0	30	
31	31	134	1	10	23	1	0	0	1	0	1	40	
41	41	17	9	24	633	177	97	5	4	2	2	50	
51	51	21	1	0	5	24	1	1	1	0	20	60	
61	61	1	1	1	1	59	1	23	0	1	6	70	
71	71	58	5	1	0	0	0	7	0	0	0	80	
81	81	0	0	0	13	0	0	550	2000	0	0		

The first part of the paper discusses the importance of the research and the objectives of the study. It then moves on to a literature review, which provides a background on the topic and identifies the gaps in the existing research. The methodology section describes the research design, data collection, and analysis. The results section presents the findings of the study, and the conclusion summarizes the main points and offers suggestions for future research.

The research was conducted in a systematic and rigorous manner, following the principles of good research practice. The data were collected from a representative sample of the population, and the analysis was carried out using appropriate statistical methods. The results of the study are presented in a clear and concise manner, and the conclusions are based on the evidence gathered.

The study has several strengths, including a large sample size, a well-defined research design, and the use of appropriate statistical methods. However, there are also some limitations, such as the potential for bias in the sample and the fact that the study is cross-sectional. Despite these limitations, the study provides valuable insights into the topic and contributes to the existing knowledge.

In conclusion, the study has shown that there is a significant relationship between the variables under investigation. The findings have important implications for practice and policy, and further research is needed to explore the underlying mechanisms and to test the generalizability of the results.

Introduction

In October 1995, CH2M HILL conducted a work session with the City of Sedona staff, and representatives of ADOT, Coconino and Yavapai Counties, Sedona Police, and NACOG. Its purpose was to determine the objectives of an Origin-Destination (O-D) Study, and to outline an implementation strategy. The study area limits are the same as those used in the Sedona Area Transportation Study, as shown in Figure 1.

The work session began by establishing the objectives of the O-D Study. Ten specific questions were proposed for which the study should address:

1. What are the Trip Patterns of the Local Residents?
2. How do the Trips use the State System (i.e. Commuting, Ex-internal, Ex-Ex)?
3. What are the destinations of the Tourist Trips?
4. What information can help determine off-highway connections?
5. What volume of trips would use a new link between SR 179 and SR 89A?
6. What are the trip lengths for trips originating outside the area?
7. What trips would use transit?
8. What Key Destinations would support a transit system?
9. Consideration of Pedestrian and Bicycle Facilities
10. What would be the benefits and effects of the Red Rock Crossing?

With the objectives laid out, discussions focused on a plan for obtaining the necessary traffic data. Methodologies were outlined, and three basic data collection types were selected:

- On Route (Highway) Survey
- Parking Survey
- Residential Questionnaire

Finally, the meeting discussed the approaches for implementing the data collection activities. Details of the work session are presented in the minutes and attached as Exhibit 1.

This report does three things. First, it presents the results of the O-D Study by addressing the ten questions laid out in the work session. Second, it documents the methodologies, data, and analyses for each of the three data collection activities performed. And third, it presents the validation of the Sedona Traffic Model and makes recommendations for refinement.

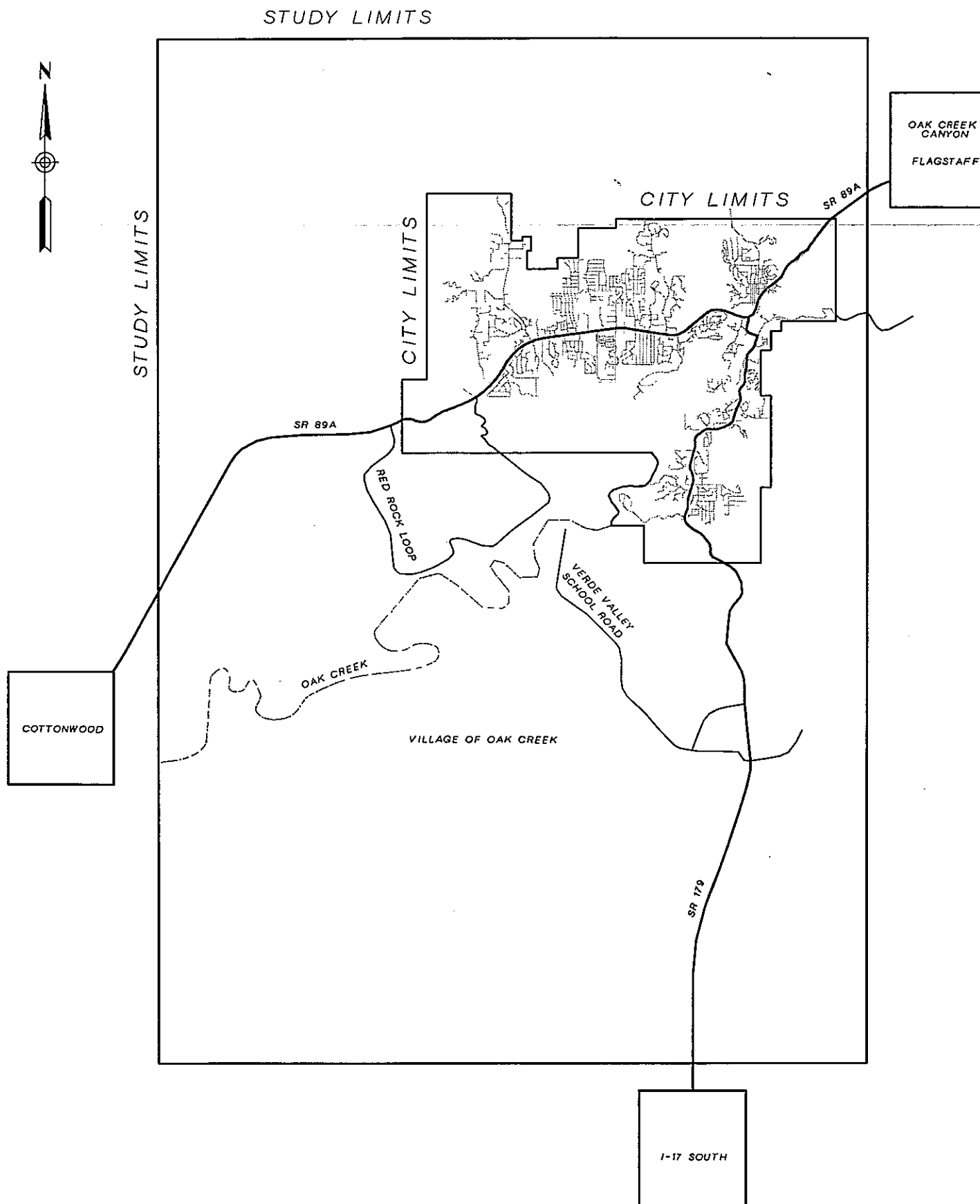


FIGURE 1
STUDY AREAS

Results of the O-D Study

1. What are the Trip Patterns of the Local Residents?

Resident Trips

The trip behavior of the local residents is derived from two sources, the On Route interviews and the Resident Questionnaire. The On Route interviews tend to represent external (visitor) origins, where the Resident Questionnaire tend to represent local traffic patterns. Thus, analyzing the results from each source independently provides further understanding of the overall traffic patterns.

The O-D Study area was divided into 10 Areas to display the results of the study. These areas are groups of Traffic Analysis Zones used in the City of Sedona Traffic Model. Areas 1-8 are contained within the city limits, and are shown in Figure 2. Area 9 includes the populated areas west of the city, including the Red Rock Loop area, and Area 10 consists of the Village of Oak Creek.

Overall Trip Patterns

The On Route interviews and the Resident Questionnaires categorized the trips into five types: commute, business, shopping, tourist/recreational, and through trips. Figures 3 through 6 present the dominant trip patterns derived from the data collection for all five trip purposes combined. The percentages shown are the major patterns from one area to the other. Less significant traffic patterns (less than 4%) are not shown, and make up the remainder of all origin/destination trips recorded.

Discussion of Findings

Results of the data collection activities produced a consistent pattern confirming previously observed suspicions. From the On Route interview, it was found that trips generating from within the city boundaries are attracted primarily to either the Uptown area or the central section (Dry Creek Road to Coffee Pot Road) of West Sedona. Also, trips generated outside the city limits come primarily from the Village of Oak Creek.

The results of the resident survey clearly shows that all major trip patterns by residents of Sedona are either produced from or attracted to central West Sedona. Similarly, the trip patterns to the Uptown area are generated primarily by non-residents.

Trip patterns on Saturday, generated from the SR179 On-Route interviews, indicate a significant influence from tourists, where the patterns show higher proportions of trips to the Uptown and Oak Creek Canyon areas (Figures 15 and 16).

Commuter Trips

Figures 7 through 9 display the dominant trip patterns derived from the On Route interviews and the Resident Questionnaires for commuter trips.

Discussion of Findings

Commuter trip patterns are similar to the total trip patterns in that the internal trips are generally produced or attracted to central West Sedona and Uptown. The resident commuter trips include $46 \pm 2.2\%$ destined for Areas 8 and 2 (central West Sedona), and $25 \pm 1.9\%$ destined to Area 4 (Uptown). Similarly, the SR89A On Route interview reveals $20 \pm 2.5\%$ of the commuter trips were produced from SR89A West (primarily Cottonwood) and $31 \pm 2.9\%$ were generated from the Village of Oak Creek. *This suggests that roughly half of the commuter trips on SR89A are generated from Cottonwood and the Village of Oak Creek.*

In addition, the SR179 Fri. On Route interviews indicate that commuters from the Village of Oak Creek split east and west nearly equal at the "Y" Intersection. There is a commuter trip pattern between the Village of Oak Creek and SR89A West indicated by both the SR89A and SR179 Fri. interviews.

Shopping and Business Trips

Figures 10 through 13 display the dominant trip patterns derived from the On Route interviews and the Resident Questionnaires for shopping and business trips.

Discussion of Findings

The SR179 On Route interviews reveal a greater proportion of shopping/business trips from the Village of Oak Creek are destined to central West Sedona than Uptown. Similarly, the residential survey indicates that $70 \pm 2.0\%$ of the shopping destinations are to Area 8 (central West Sedona), and only $7 \pm 1.1\%$ are destined to Area 4 (Uptown). These results indicate that most residential based shopping trips are attracted to the West Sedona area, and a much smaller proportion to Uptown.

Of equal interest is the dissimilarity in the results of the data collected. For instance, the On Route interviews indicate a large trip exchange between the Uptown area and central West Sedona, where the residential survey does not produce a similar pattern. Comparing these two results suggests there are numerous business trips made throughout the day between the two commercial centers. Such trip information would be detected by the On Route interviews and not necessarily by the resident survey.

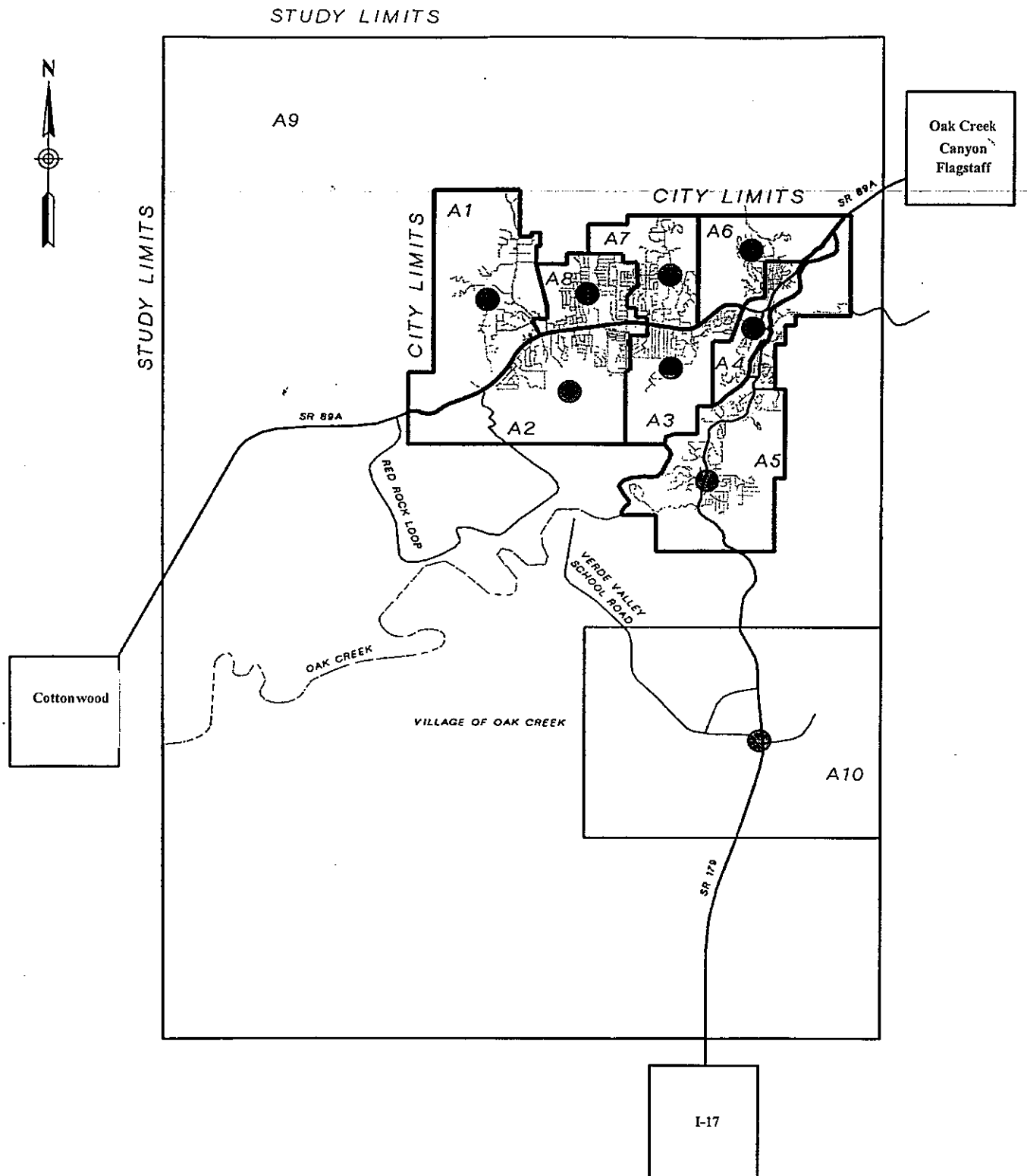


Figure 2
ANALYSIS AREAS
 City of Sedona Origin-Destination Study
 February 1996

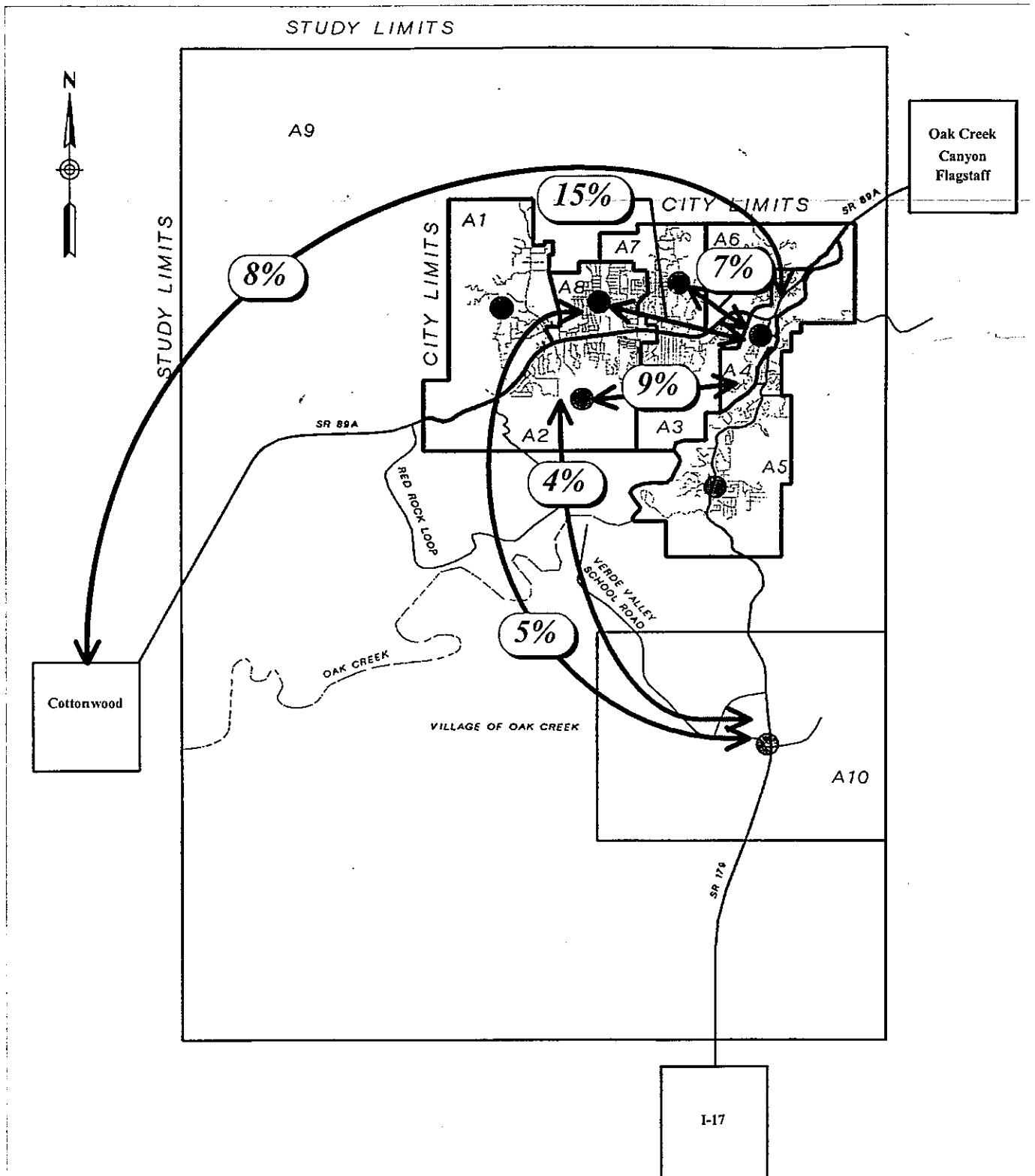


Figure 3
Major Trip Patterns - SR89A
 City of Sedona Origin-Destination Study
 February 1996

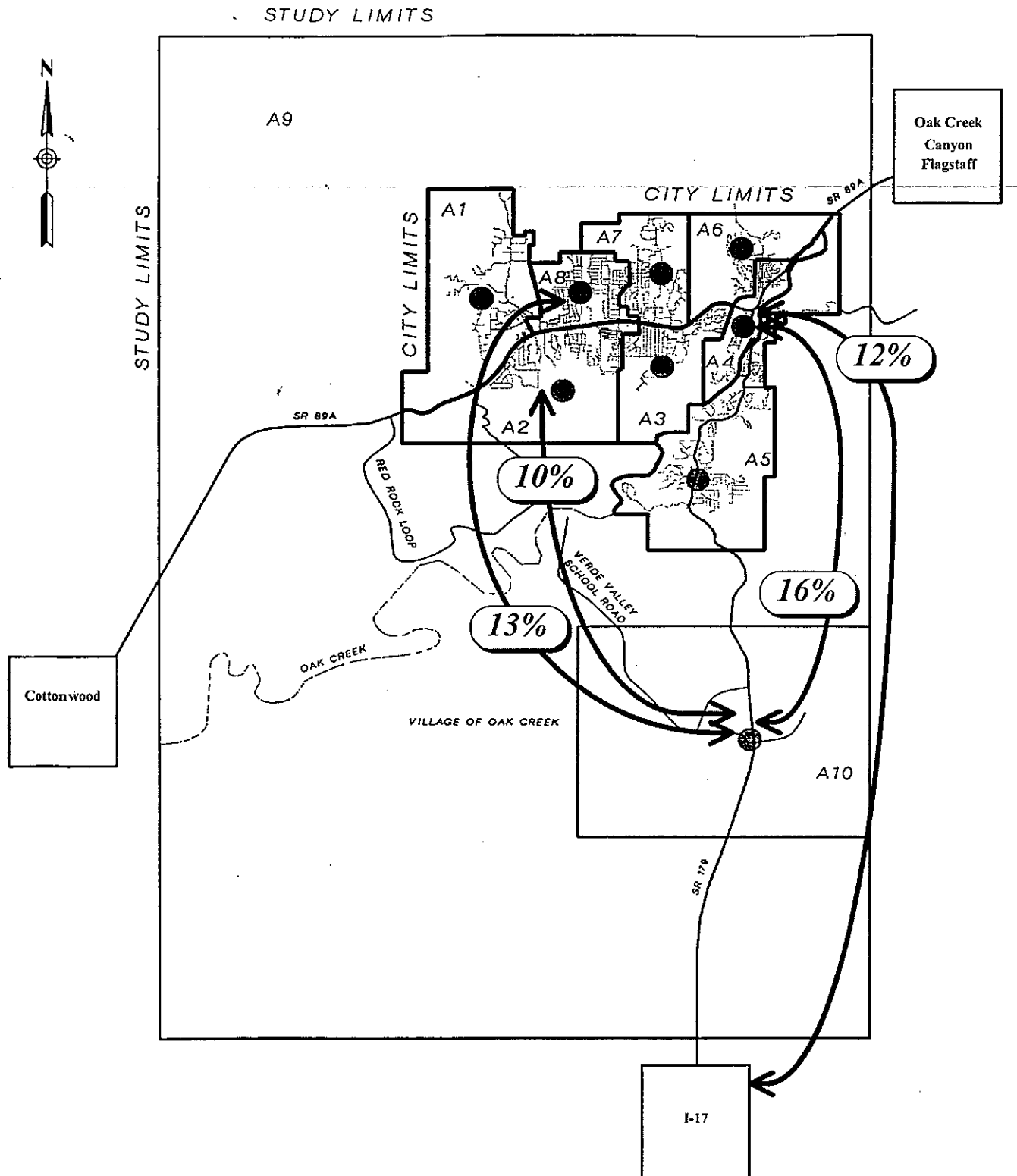


Figure 4
Major Trip Patterns - SR179 Friday
 City of Sedona Origin-Destination Study
 February 1996

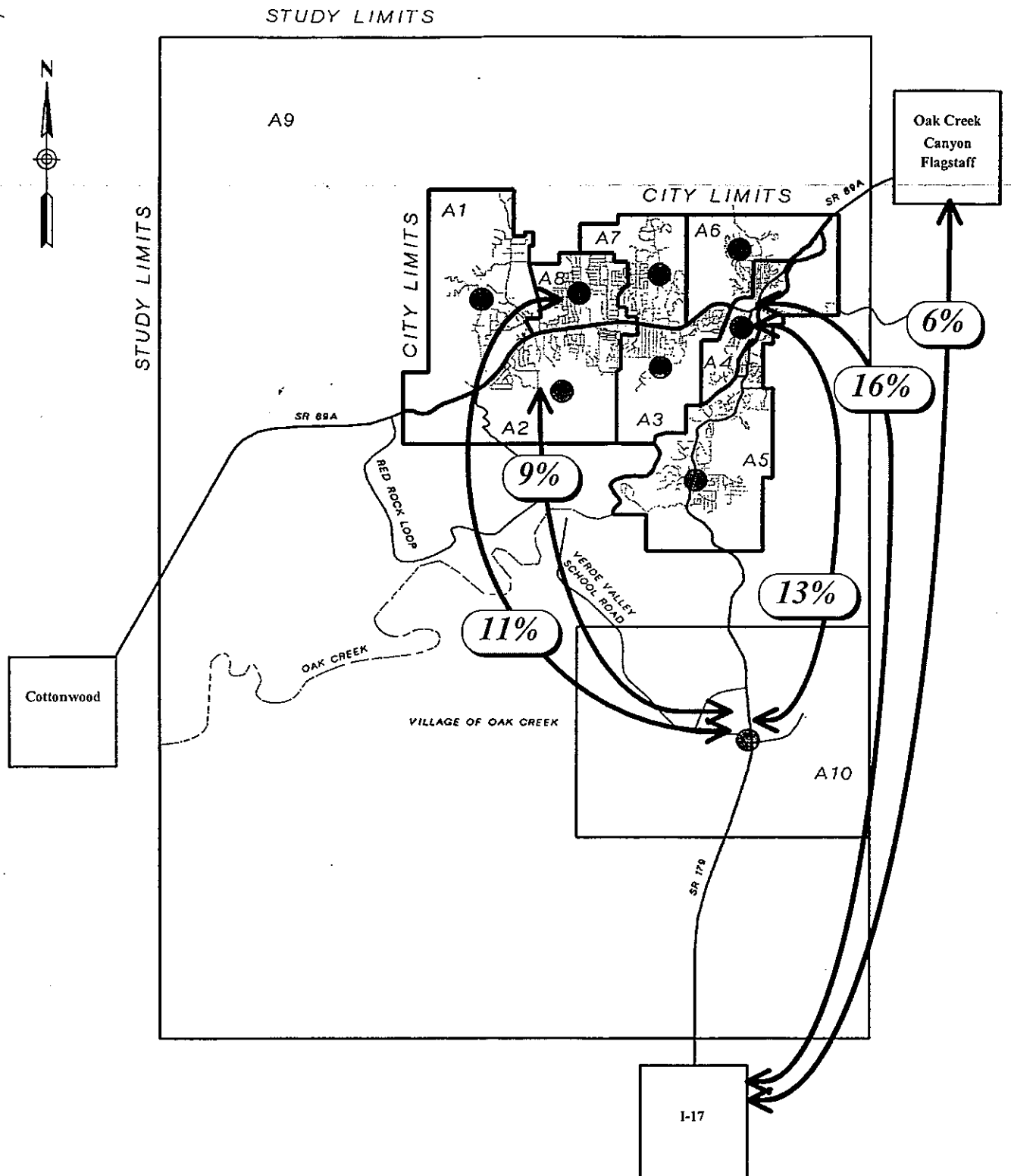
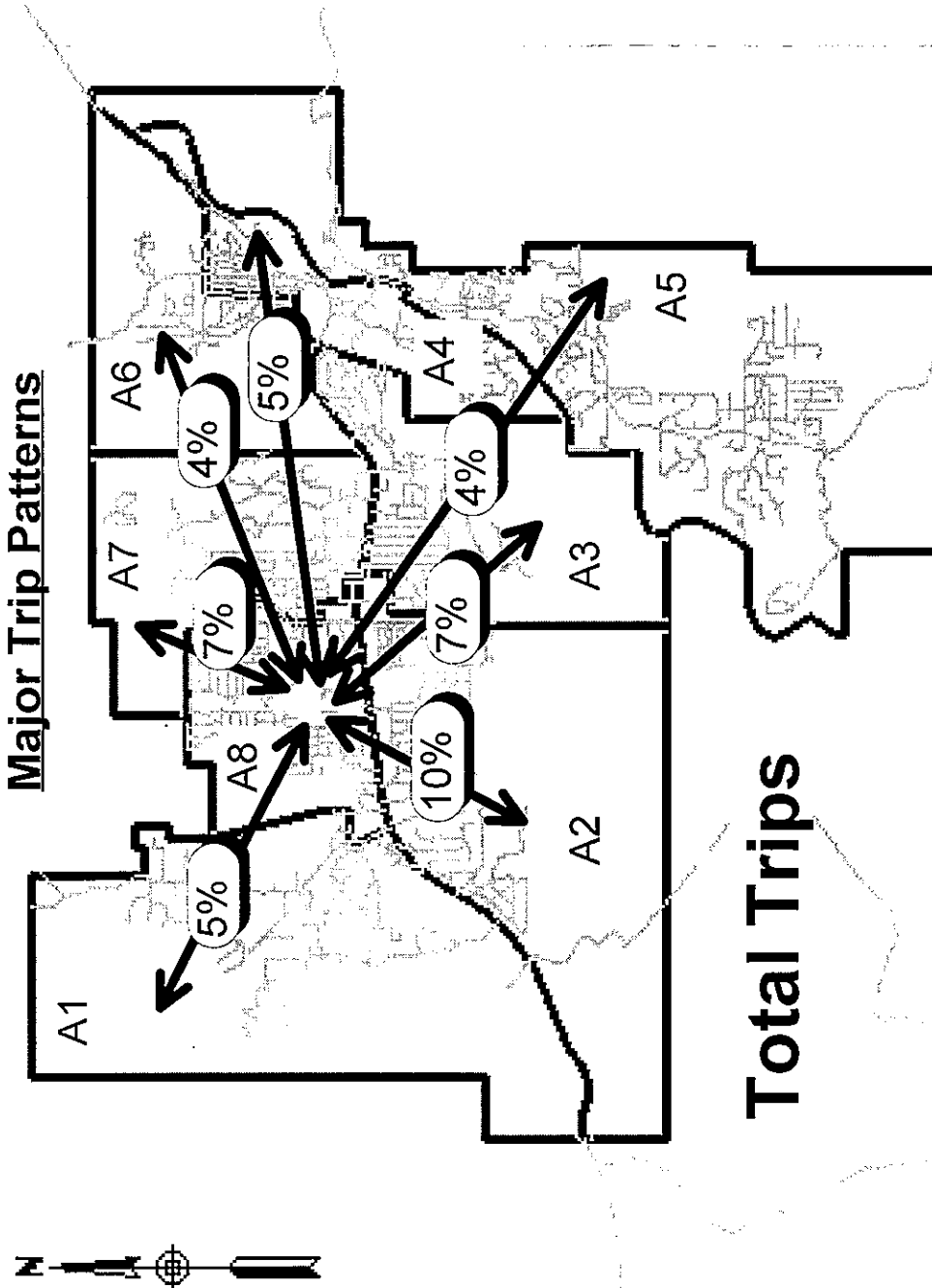


Figure 5
Major Trip Patterns - SR179 Saturday
 City of Sedona Origin-Destination Study
 February 1996



Major Trip Patterns

Total Trips



Figure 6
Sedona Resident Survey

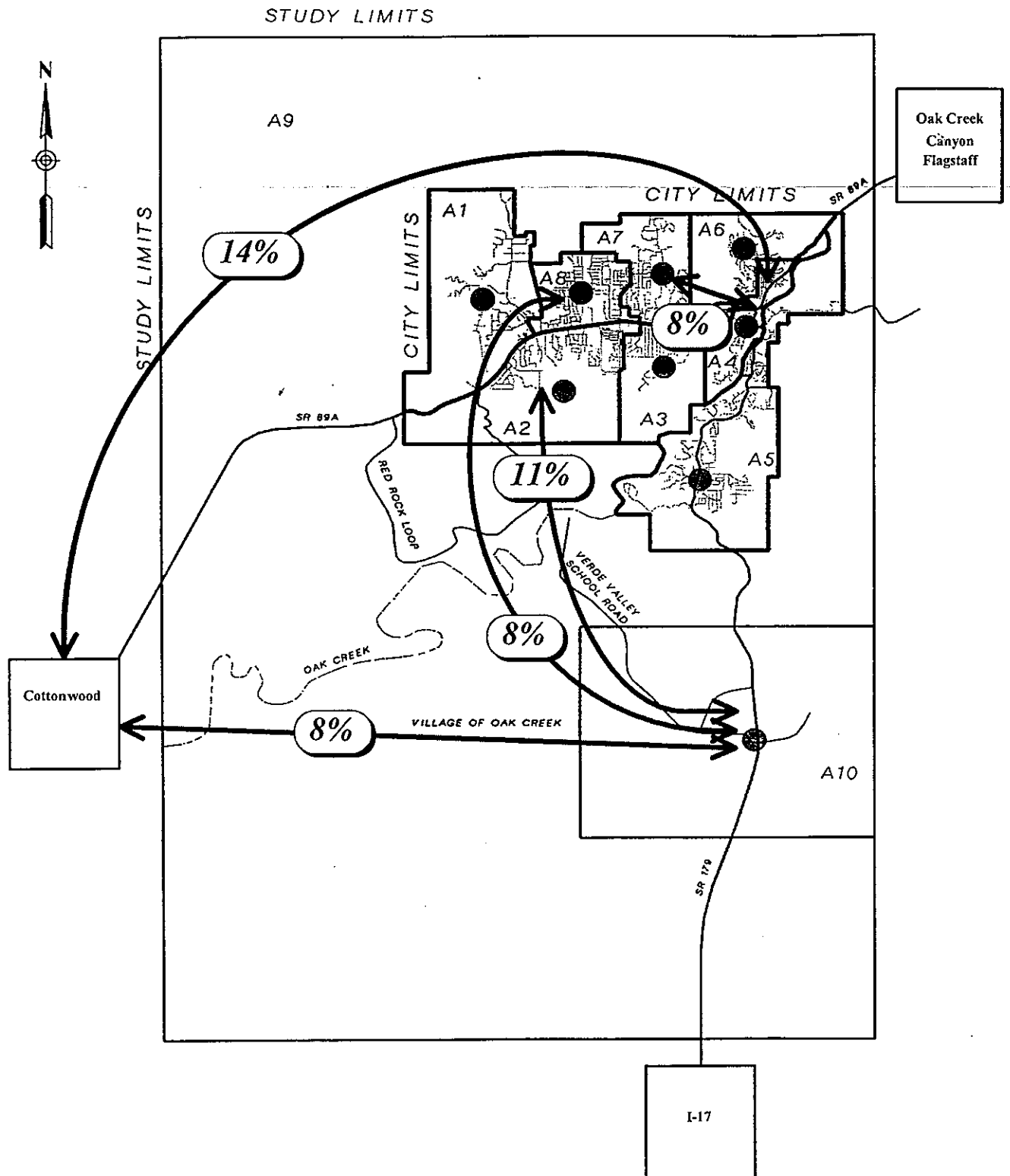


Figure 7
Major Trip Patterns - SR89A Commuters
 City of Sedona Origin-Destination Study
 February 1996

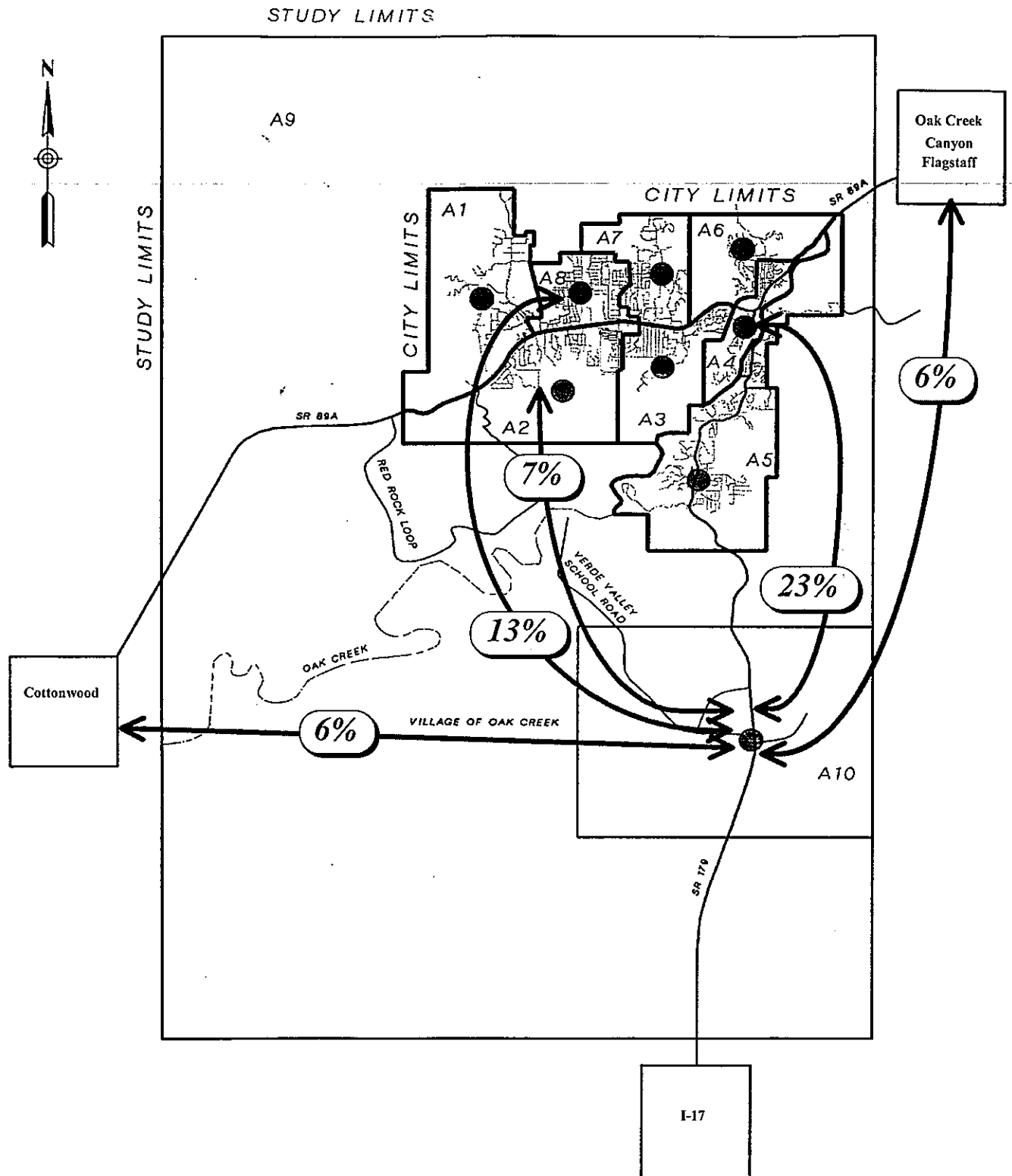
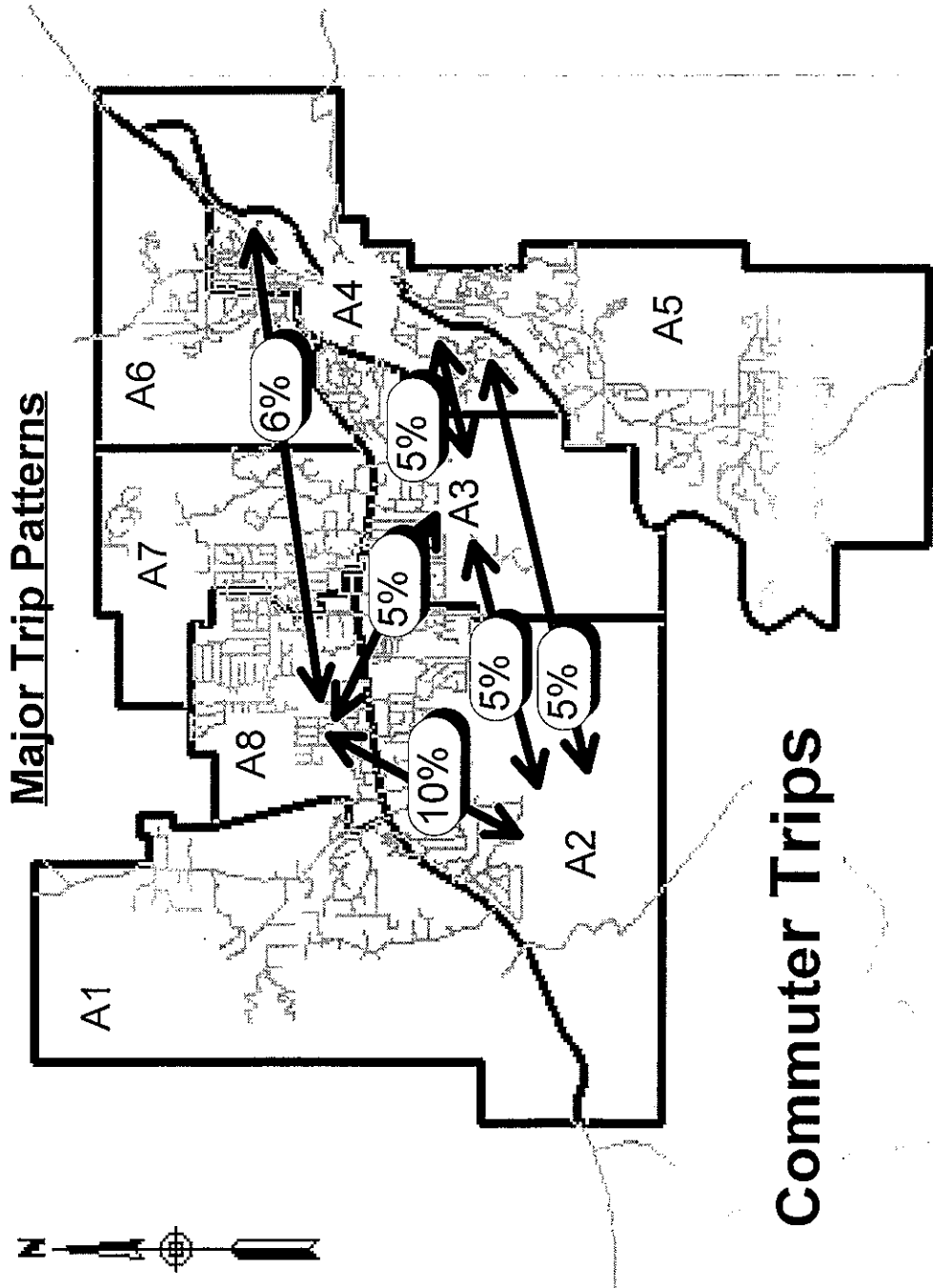


Figure 8
Major Trip Patterns - SR179 Friday Commuters
 City of Sedona Origin-Destination Study
 February 1996



Major Trip Patterns

Commuter Trips



Figure 9
Sedona Resident Survey

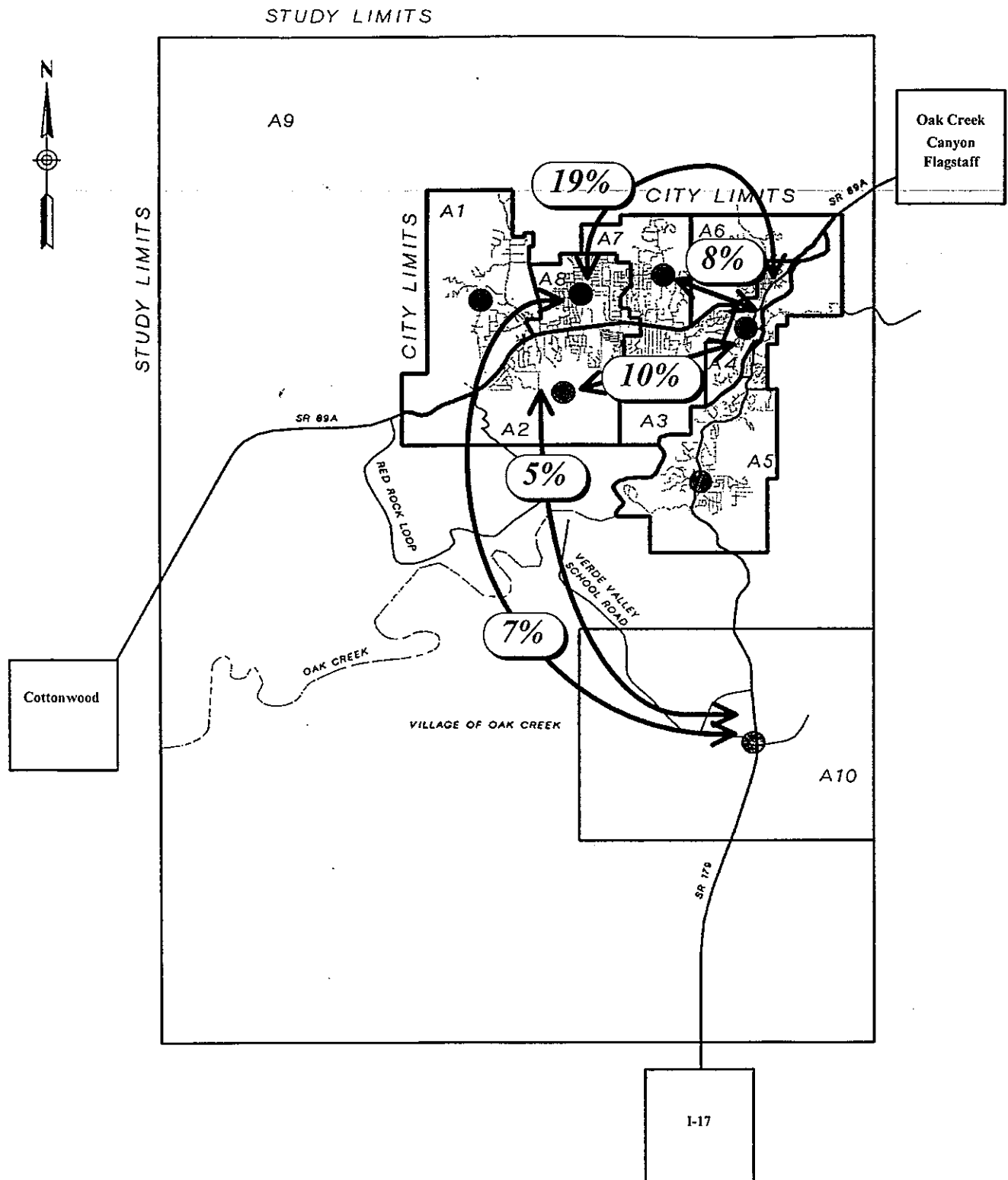


Figure 10
Major Trip Patterns - SR89A Shopping and Business
 City of Sedona Origin-Destination Study
 February 1996

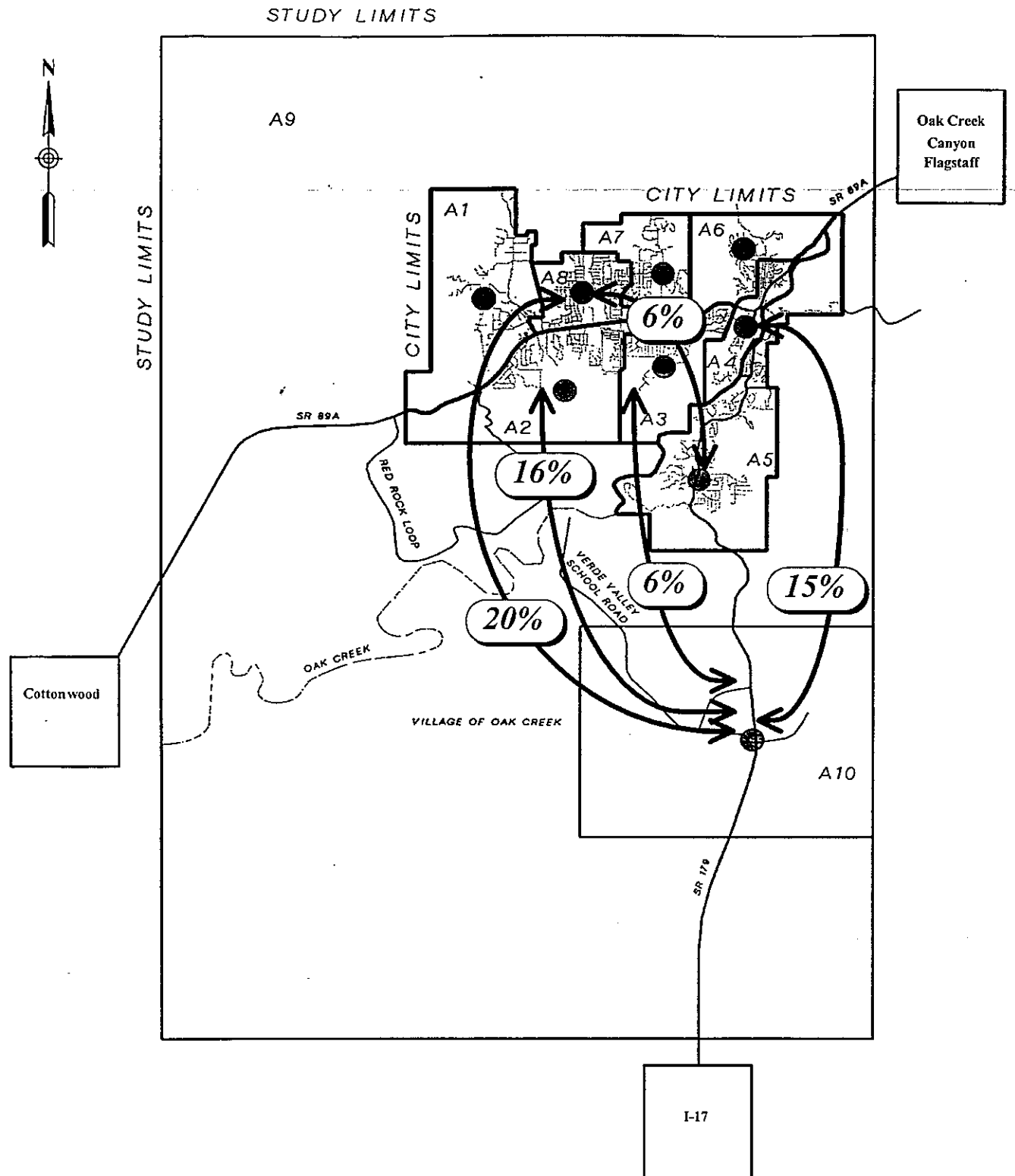


Figure 11
Major Trip Patterns - SR179 Friday Shopping and Business
 City of Sedona Origin-Destination Study
 February 1996

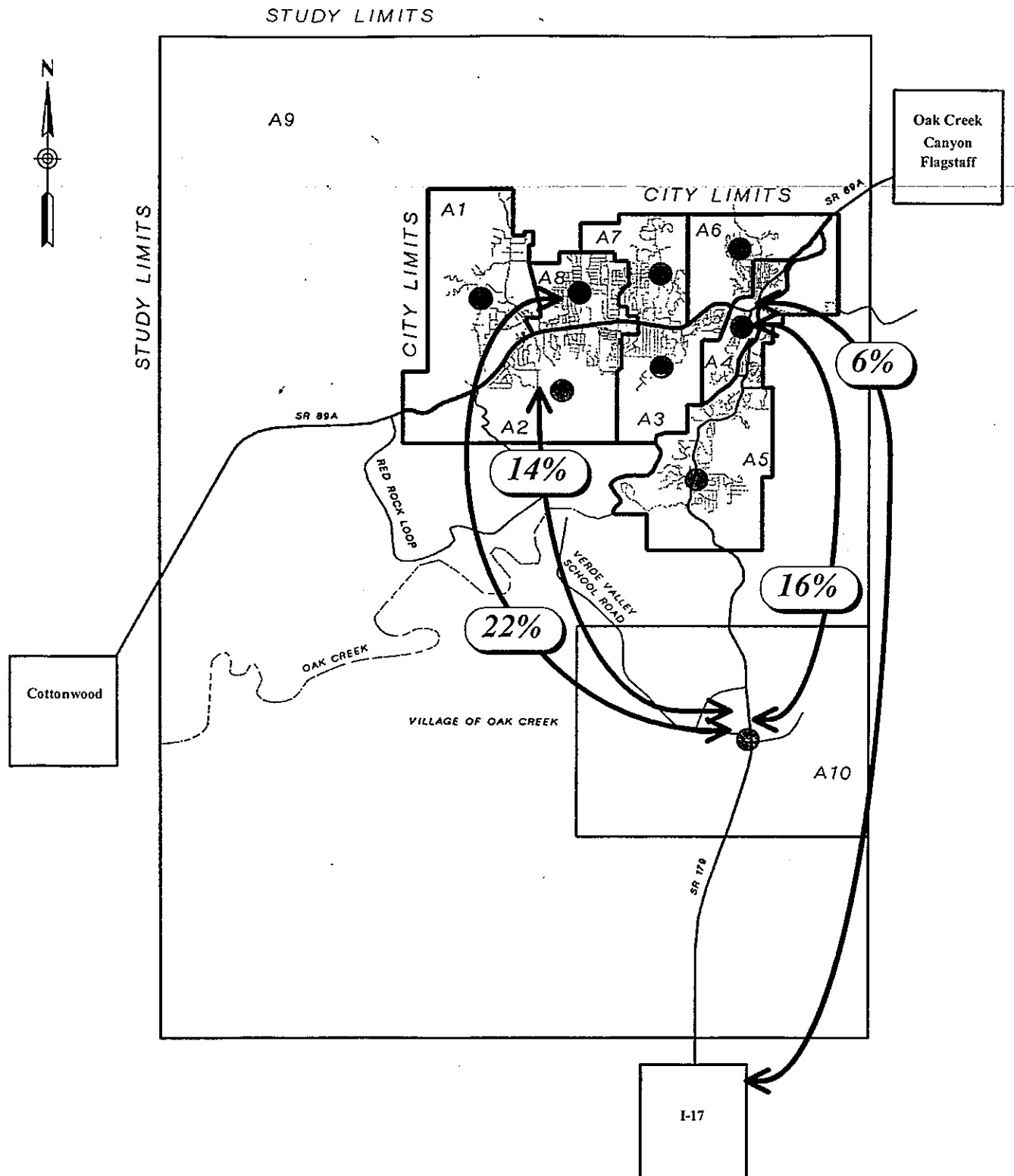


Figure 12
Major Trip Patterns - SR179 Sat. Shopping and Business
 City of Sedona Origin-Destination Study
 February 1996

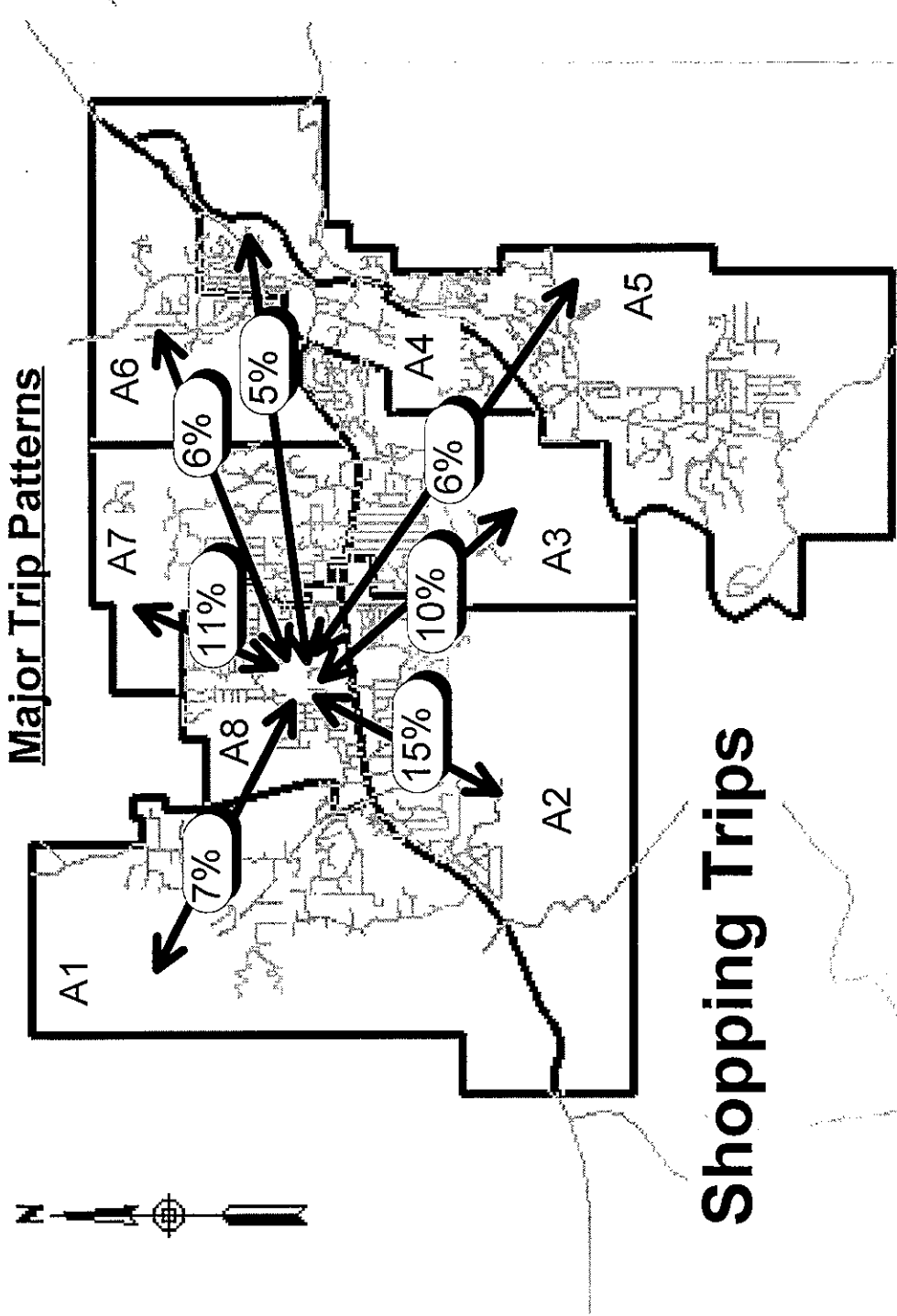


Figure 13
Sedona Resident Survey

2. How do the Trips use the State System (i.e. Commuting, Ex-internal, Ex-Ex)?

Through Trips

A **through trip** is defined as a trip that begins outside the limits of the study area, passes through, and ends outside the study area. As shown in Figure 2, the Village of Oak Creek is considered inside the Sedona study area, where Cottonwood, Oak Creek Canyon, and Flagstaff are outside the study area. Thus, the Village of Oak Creek is considered part of the internal trips, where the others are external trips.

There are three types of through trips. SR 89A West to SR 89A North is a trip that begins (or ends) west of Sedona and travels to (or from) the Oak Creek Canyon area. SR 89A West to SR 179 South is a trip with one end west of Sedona study limits, and the other end south of the Village of Oak Creek. The third through trip is SR 179 South to SR 89A North, connecting points south of the Village of Oak Creek to points north of the study area.

The following summarizes through trips recorded during the On Route interviews as a percent of the total number of trips recorded. Also shown are the traffic counts taken during the interviews for the given direction of travel.

SR 89A

SR 89A West to SR 89A North	2.6 ± 1% of traffic stream (700 ± 270 Veh/day)
SR 89A West to SR 179 South	0.4 ± 0.4% of traffic stream (110 ± 110 Veh/day)

SR 179

SR 179 South to SR 89A West (Fri.)	1.0 ± 0.6% of traffic stream (140 ± 80 Veh/day)
SR 179 South to SR 89A North (Fri.)	3.9 ± 1.2% of traffic stream (540 ± 160 Veh/day)
SR 179 South to SR 89A West (Sat)	1.0 ± 0.6% of traffic stream (130 ± 80 Veh/day)
SR 179 South to SR 89A North (Sat)	6.2 ± 1.5% of traffic stream (830 ± 200 Veh/day)

External Trips

An **external trip** is defined as a trip that begins (or ends) outside the study area and ends (or begins) inside the study area. Trip origins or destinations inside the study are further defined as one of three subareas: West Sedona (West of Cook's Hill), the Village of Oak Creek (South of Mallard Drive), and the Uptown/Oak Creek area (East of Cook's Hill and North of Mallard Drive).

The following lists the external trips recorded as a percent of the total trips recorded during the On Route interviews. Similar to that above, the traffic count data is presented for each of the directions of travel. Additional data is also presented from previous traffic counts since the information contributes toward defining the overall traffic patterns for the study area.

SR 89A (SR179-Fri interviews)

SR89A West to Uptown	8.3 ± 1.8% of traffic stream (2260 ± 490 Veh/day)
SR89A West to VOC	1.2 ± 0.7% of traffic stream (170 ± 100 Veh/day)
SR89A North to VOC	1.1 ± 0.6% of traffic stream (150 ± 80 Veh/day)
SR89A North to West Sedona	9.6 ± 1.9% of traffic stream (2600 ± 510 Veh/day)

The remaining trips entering from the west are destined to the West Sedona area, and those from the north are destined to Uptown. By subtracting the volumes shown above from known 24 hour volumes, these additional volumes can be approximated.

SR89A West to West Sedona	8760 ± 970 Veh/day (Based on 24 hour count at URRL)
SR89A North to Uptown	4010 ± 1020 Veh/day (24 hr count at SR89A North)

SR 179 Friday

SR179 South to West Sedona	4.3 ± 1.2% of traffic stream (1160 ± 320 Veh/day)
SR179 South to Uptown	14.9 ± 2.2% of traffic stream (2040 ± 300 Veh/day)

The remaining trips entering from the south would be destined to the Village of Oak Creek area, and this volume is approximated as;

SR179 South to VOC	2120 ± 860 Veh/day (24hr count at SR179 South)
--------------------	--

SR 179 Saturday

SR179 South to West Sedona	4.7 ± 1.3% of traffic stream (610 Veh/day ± 170)
SR179 South to Uptown	19.0 ± 2.5% of traffic stream (2500 Veh/day ± 330)

The remaining trips entering from the south would be destined to the Village of Oak Creek area, and this volume is approximated as;

3. *What are the destinations of the Tourist Trips?*

Tourist Trips

Tourist trip information is derived from the On Route interviews on SR89A and SR179. Proportion of tourist traffic on SR179 is shown to range as much as 40%-50%, compared to SR89A with about 20% tourist traffic. Review of the data suggests that the majority of trips are destined for the Uptown area as shown in Figures 15 and 16.

One problem with interviewing tourist drivers is that they frequently do not have a specific destination in mind. Many responses to the on route interviews indicated general destinations, such as "Shopping", "Uptown", "All Around", and "Someplace to Eat". Essentially, they do not know where they are going until they have arrived. These non-specific responses were proportionately allocated to the commercial TAZ's as a destination, and adjusted based on commercial employment. ~~An~~ Example, the trips recorded as destined to Uptown were redistributed among the 6 TAZ's that comprise the Uptown District.

For

Overall Trip Patterns

The tourist trip patterns from the SR89A and SR179 Fri. On Route interviews are shown in Figures 14 and 15.

The SR89A interviews reveal that the major trip patterns are external, meaning that they connect to an origin/destination outside the study area (e.g., Cottonwood, Oak Creek Canyon, and SR 179 South). However, there is also a noticeable internal trip pattern between Uptown and Area 2 (Red Rock Loop, Red Rock State Park).

Trip patterns along SR179 are primarily between Uptown, Village of Oak Creek, and SR179 South. Few connect with SR89A West (Cottonwood).

As one might expect, a significant amount of tourist trips begin or end outside the Sedona Area, with most trips associated with SR179 South.

Tourist Destinations

The SR179 interviews show that $54 \pm 3.1\%$ of all tourist trips on SR179, begin or end in Uptown. The SR89A interviews indicate that $71 \pm 2.9\%$ of all tourist trips on 89A, begin or end in Uptown or the Red Rock Loop Area.

It is interesting to note that the tourist destinations of Dry Creek Road and the Chapel of the Holy Cross did not produce significant travel patterns in the data.

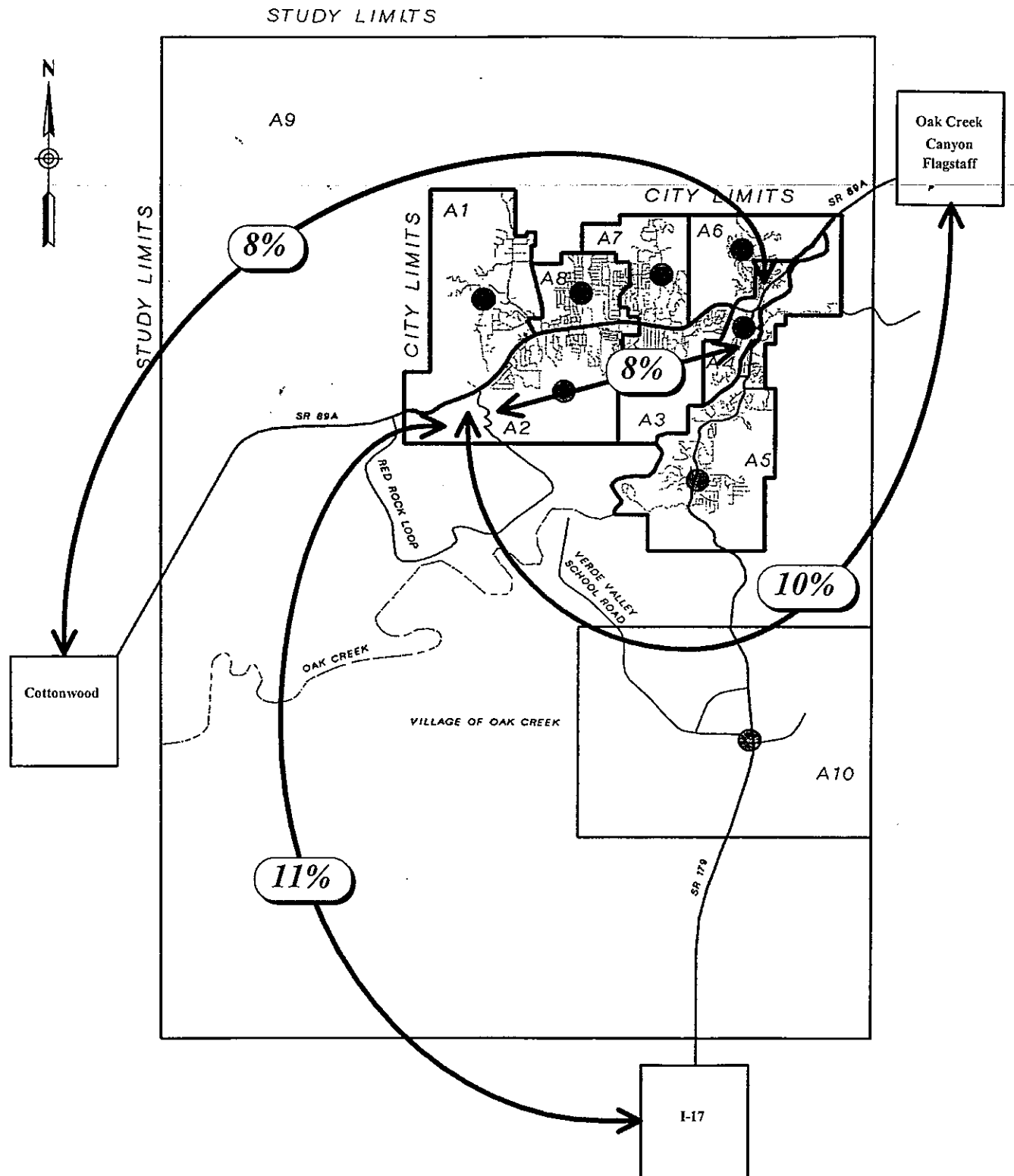


Figure 14
Major Trip Patterns - SR89A Tourist/Rec.
 City of Sedona Origin-Destination Study
 February 1996

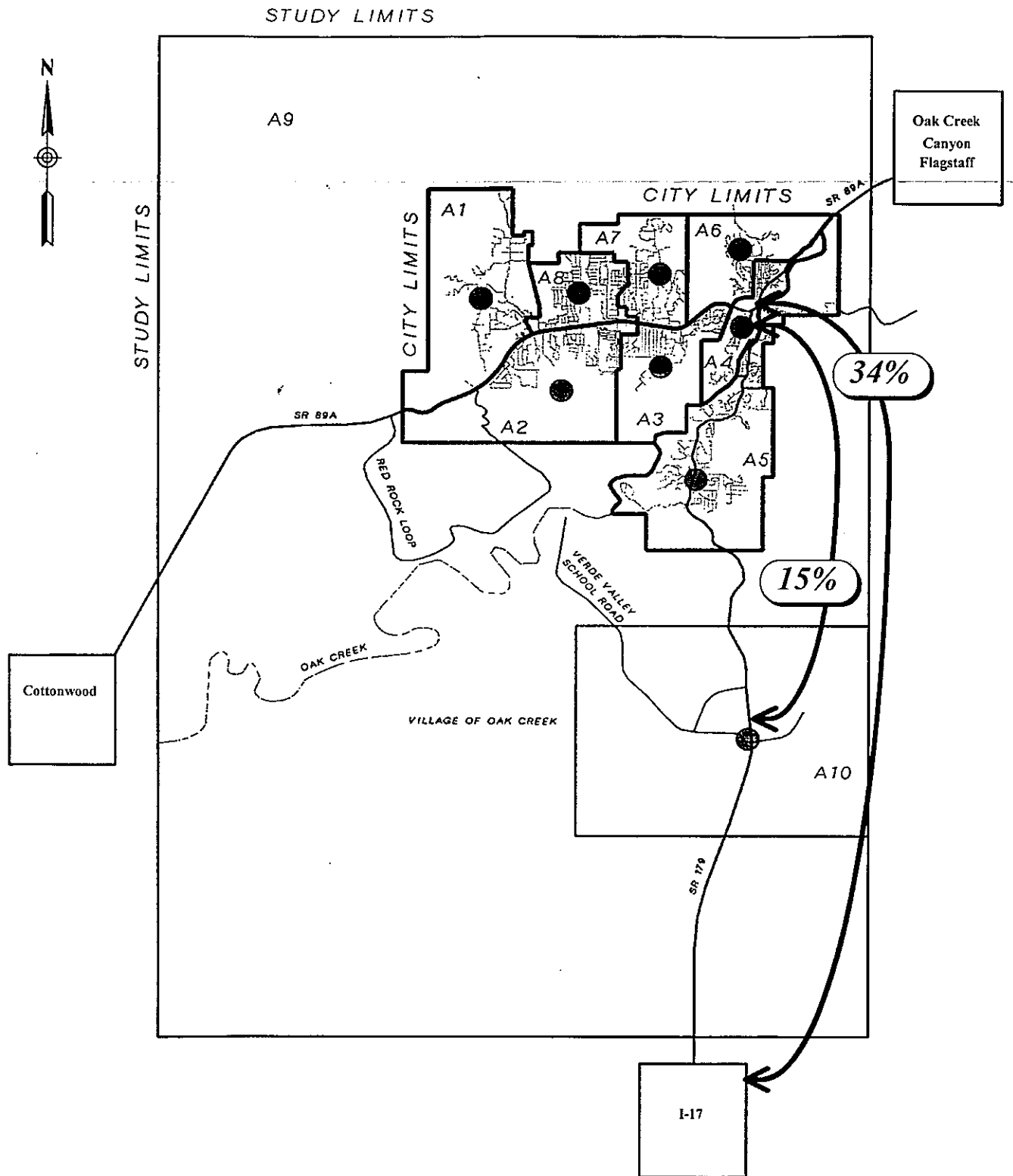


Figure 15
Major Trip Patterns - SR179 Fri. Tourist/Rec.
 City of Sedona Origin-Destination Study
 February 1996

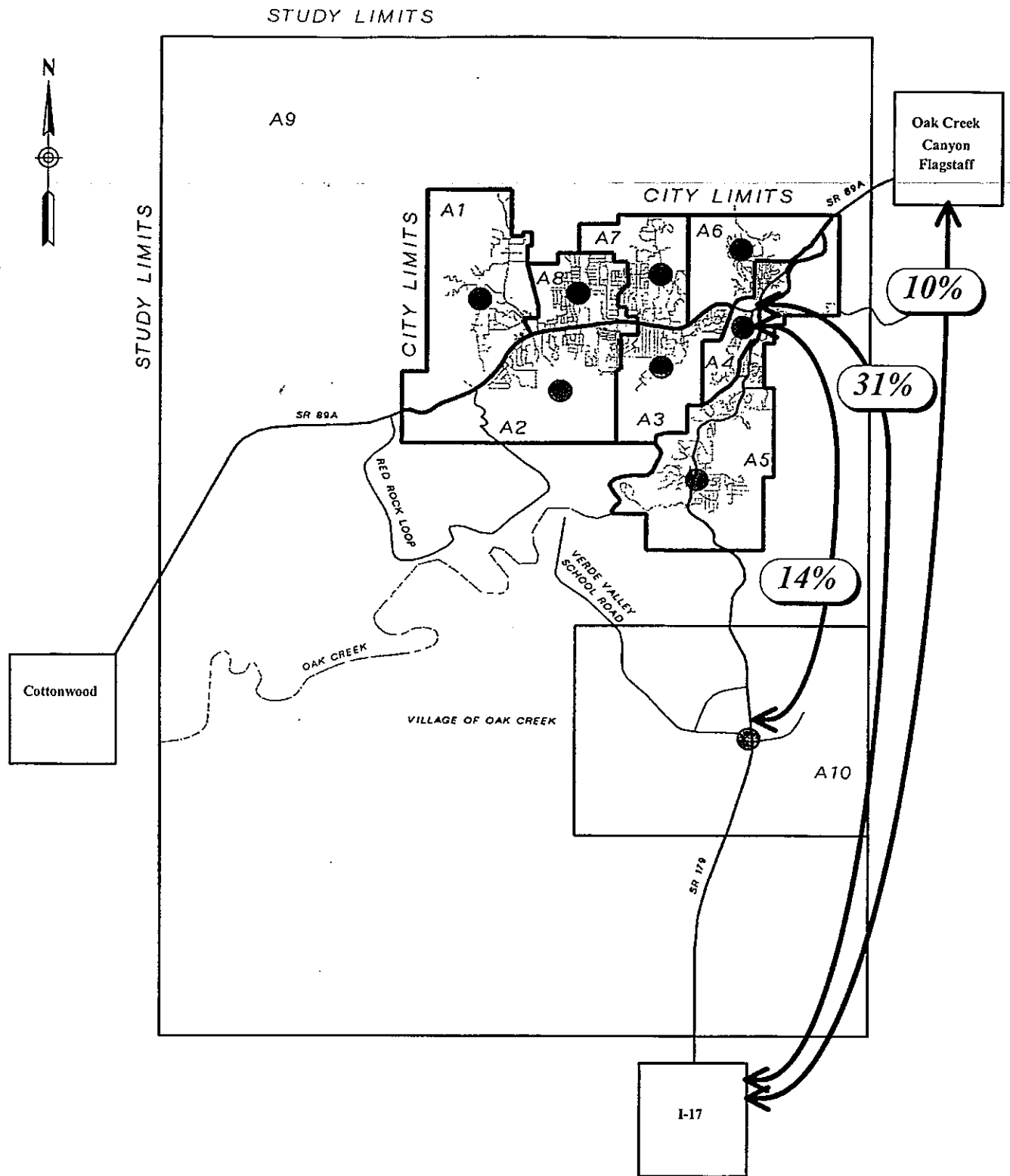


Figure 16
 Major Trip Patterns - SR179 Sat Tourist/Rec.
 City of Sedona Origin-Destination Study
 February 1996

Weekend Travel Patterns

On Route interviews were performed on SR179 on Saturday to determine if tourist travel patterns are significantly different on the weekends. Figure 16 shows the major travel patterns from the SR179 Sat interviews. The patterns are essentially the same as the SR179 Fri. patterns with the exception of a larger proportion of traffic traveling through to (or from) Oak Creek Canyon.

4. *What information can help determine off-highway connections?*
and

5. *What volume of trips would use a new link between SR 179 and SR 89A?*

Alternative Routes

There is much interest in the evaluation of alternative routes from the two state highways in and around the City of Sedona. These routes could include; Off Highway Connections north and south of SR89A, an Uptown or "Y" intersection bypass, and a new connection between SR179 and SR89A to serve the Village of Oak Creek - West Sedona corridor.

The most reliable way to evaluate the effects these alternatives may have on traffic patterns is to use a well calibrated traffic model to predict future traffic volumes. The City of Sedona Traffic Model has been validated against existing traffic counts, and can be validated against the existing trip patterns as discussed in the recommendations in the City of Sedona Traffic Model Validation section of this document.

The results of the O-D Study have confirmed various assumptions of the current traffic patterns and the various trip types.

- The results clearly indicate a significant traffic pattern between the Village of Oak Creek and the Central West Sedona area.
- The SR179 corridor is used by a greater number of tourist trips than the SR89A corridor. Conversely, the SR89A corridor is used primarily as a commercial and business corridor for local residents.
- The proportion of through volume on the state highway system is small compared to most intra-state highways elsewhere. Only 3% to 7% of the traffic volume on SR89A and SR179 were classified as through trips in the O-D study.
- The proportion of commuter trips from areas outside the Sedona City limits were recorded as high as 50% of the total commuter traffic. This suggests that Cottonwood and the Village of Oak Creek are primary trip nodes.

6. *What are the trip lengths for trips originating outside the area?*

The origins of external trips from the three On Route interview locations are as follows;

<u>ORIGIN</u>	<u>% of External Trips</u>
SR89A	
Cottonwood/Clarkdale	51%
Flagstaff	17%
Oak Creek Canyon	13%
Phoenix	7%
Other	12%
SR179 Friday	
Camp Verde	23%
Phoenix	23%
Flagstaff	15%
Oak Creek Canyon	12%
Cottonwood/Clarkdale	11%
Other	16%
SR179 Saturday	
Phoenix	50%
Camp Verde	16%
Flagstaff	11%
Oak Creek Canyon	7%
Cottonwood/Clarkdale	6%
Other	10%

7. *What trips would use transit? and*
8. *What Key Destinations would support a transit system?*

Transit Trips

The data presents a resident based trip pattern and a non-resident based trip pattern, both utilizing SR89A and SR179 as the principle roadways. The primary destinations of the resident based trips are the Village of Oak Creek, Uptown, and Central West Sedona, where the primary destinations of non-resident based trips are Uptown, Red Rock Loop Area, and external locations such as Cottonwood, Oak Creek Canyon, and SR179 South. From review of the data, there appear to be well defined trip patterns that would support a transit system. Such system could be designed to serve the resident based destinations, while intercepting non-resident based trips. Park and ride facilities could be designed and located such that they are used by residents, commuters, and tourists.

Whether a transit system is viable, however, depends on public acceptance, use, and its economic feasibility.

9. *Consideration of Pedestrian and Bicycle Facilities*

Encouraging pedestrian and/or bicycle traffic as an alternative mode of transportation, would probably not provide a noticeable reduction in the overall volume of traffic on the two primary roadways. However, pedestrian and bicycle facilities do have merit in Sedona at certain locations and conditions. For instance, pedestrian facilities should be considered in conjunction with parking scenarios in the Uptown area, especially if centralized parking is considered. Sidewalks, crosswalks, signing, and signalization would likely be appropriate with a revised parking system.

Similarly, bicycle facilities could be most effective in areas of high local traffic patterns, such as schools and public parks. The O-D study, however did not obtain adequate information to address the viability of specific facilities.

10. *What would be the benefits and effects of the Red Rock Crossing?*

This Origin-Destination Study provides a "snapshot" of the travel patterns in the Sedona study area. As indicated in Figures 7 through 13, a significant amount of traffic originates in the Village of Oak Creek area which is destined for the West Sedona and Cottonwood areas. These trips consist primarily of commuters, business trips, and shopping trips. From the On Route interviews, roughly 25% of the total traffic on SR179 and 10% of the total traffic on SR89A consists of these trip types (approximately 3000 Veh/day).

The controversial Red Rock Crossing would provide an alternate route for these trips. Such an alternate route could offer some relief to the traffic on SR89A and SR179, and at the "Y" intersection. However, a better understanding of the effects such alternate route would have on the existing corridors requires further study, namely additional data/analysis of the Village of Oak Creek traffic, and analysis of the Sedona Traffic Model.

Data Collection

On Route Interviews

The main objective of the On Route Interviews is to obtain a cross section of the trips on the facility. Since the driver is in the process of completing the trip, the driver can very accurately provide origin, destination, and trip purpose information. A summation of all trips intercepted can reveal the principle trip patterns associated with the facility.

Locations

Two locations for On Route Interviews were selected, the first along SR 89A, and the second along SR 179. A location on SR 89A between the West Sedona area and Uptown was chosen to reveal trip patterns between West Sedona and destinations to north and south of the 'Y' intersection(e.g., Uptown and the Village of Oak Creek). The actual interview site was located at the crest of Cook's Hill approximately three-quarters of a mile west of the SR 89A/SR 179 intersection.

An interview location along SR 179 should help in the understanding of the trip patterns between the Village of Oak Creek and Sedona, and identify Tourist trip patterns within the corridor. A location north of the Chapel Road turnoff was recommended to intercept tourist trips to and from the Uptown area and the Chapel of the Holy Cross. However, to clearly understand the commuter and shopping patterns of the Village of Oak Creek residents it is important to select a location south of any major employment or shopping destinations. The interview location was selected at the Mallard Drive intersection, since this intersection is north of Chapel Road, and south of the Poco Diablo Resort area.

The On Route interviews were completed on Thursday, November 2, 1995 for SR 89A, and Friday, November 3, 1995 and Saturday, November 4, 1995 on SR 179. Eastbound SR 89A and Northbound SR 179 interviews were conducted from 8:00 AM to 11:00 AM, and the opposite directions from 1:00 PM to 4:00 PM, however, WB SR 89A interviews were terminated at 3:00 PM due to traffic congestion.

Sampling method

The On Route interviews were conducted by randomly selecting groups of 4 vehicles from the traffic stream and asking the driver a standard list of questions. Table 1 is an example of the standard form that was filled out for each vehicle.

Estimation of Sampling Error

Results of the On Route Interviews are primarily expressed as proportions. The accuracy of the statistics derived from the interviews is typically given by a range for a given

Table 1

City of Sedona - Traffic Survey Questionnaire

Northbound SR 179, AM Peak Period, November 4, 1995

OCCUPANCY

1

2

3

4+

1. From Where did you just come?

SEDONA

SD

Subdivision / Business / Cross Roads / Area

VOC

VOC

FLAGSTAFF

FL

OAK CREEK CANYON

OCC

COTTONWOOD/CLARKDALE

C/C

PHOENIX

PHX

CAMP VERDE

CV

AZ

2. Where are you going now?

SEDONA

SD

Subdivision / Business / Cross Roads / Area

VOC

VOC

FLAGSTAFF

FL

OAK CREEK CANYON

OCC

COTTONWOOD/CLARKDALE

C/C

PHOENIX

PHX

CAMP VERDE

CV

AZ

3. What is the primary purpose of this trip?

COMMUTE

C

BUSINESS

B

SHOPPING

S

TOURIST / RECREATIONAL

T/R

THRU

X

4. How often do you make a similar trip?

D

DAY

W

WEEK

M

MONTH

Y

YEAR

5. What City and State do you reside in?

confidence interval. An example of this would be $25 \pm 3\%$ with 95% confidence, where the range of error is $\pm 3\%$, and the confidence interval is 95%.

Confidence intervals (or levels) used in practice typically range from 50% to 99.73%. The higher the confidence interval, the greater the range of error for a given statistic. For example, a statistic could be expressed as say $25 \pm 3\%$ at 95% confidence, or $25 \pm 1\%$ at 80% confidence. Statistically, the 95% confidence interval is essentially the same as the standard deviation 2 on a normal distribution curve (95.45% actual). This is a widely accepted level of accuracy for most data sampling methods, and is used throughout this study. Therefore, if a statistic is quoted as say $17 \pm 2\%$ in this report, then the true value is expected to be between 15% and 19%, 95% of the time.

Determination of the range of error, then, is based on the sample size and the total population available. In the case of the On Route Interviews, for example, the number of interviews is the sample size and the total number of vehicles (by direction) passing the interview location is the population size.

Data Summary

SR 89A

Eastbound

November 2, 1995 8:00 AM to 11:00 AM

Total Number of Interviews = 584 (20% of Traffic Stream)

Westbound

November 2, 1995 1:00 PM to 3:00 PM

Total Number of Interviews = 331 (15% of Traffic Stream)

Traffic Volumes	November 2, 1995		
Location	8 AM - 11 AM	1 PM - 3 PM	24 hr vol.
EB SR 89A @ Airport Rd.	2925	2225	13,956
WB SR 89A @ Airport Rd.	2693	2032	13,254
NB SR 89A north of Uptown	1054	1031	5,824
SB SR 89 A north of Uptown	506	546	3,069
NB SR 179 @ Mallard Drive	1452	944	6,411
SB SR 179 @ Mallard Drive	1102	1107	6454

Trip Types

The trip data collected during the On Route Interviews was divided between Internal Trips, External to Internal Trips, Internal to External Trip, and Through Trips. An Internal Trip is defined as a trip that begins and ends within the study area. An External to Internal trip begins outside the study area and ends within the study area, conversely, an Internal to External trip begins within the study area and ends

outside the study area. A Through Trip is defined as a trip that begins and ends outside the study area, but does pass through the study area. Figure 17 shows the proportion of each trip type based on the interviews.

Trip Purpose

The trip data collected was divided between the various trip purposes that were included in the interview form. These trip purposes included, Commuter, Shopping, Business, Tourist/Recreational, and Through. Figure 18 shows the proportion of each trip purpose based on the interviews.

SR 179 Friday

Northbound

November 3, 1995 8:00 AM to 11:00 AM

Total Number of Interviews = 464 (31% of Traffic Stream)

Southbound

November 3, 1995 1:00 PM to 4:00 PM

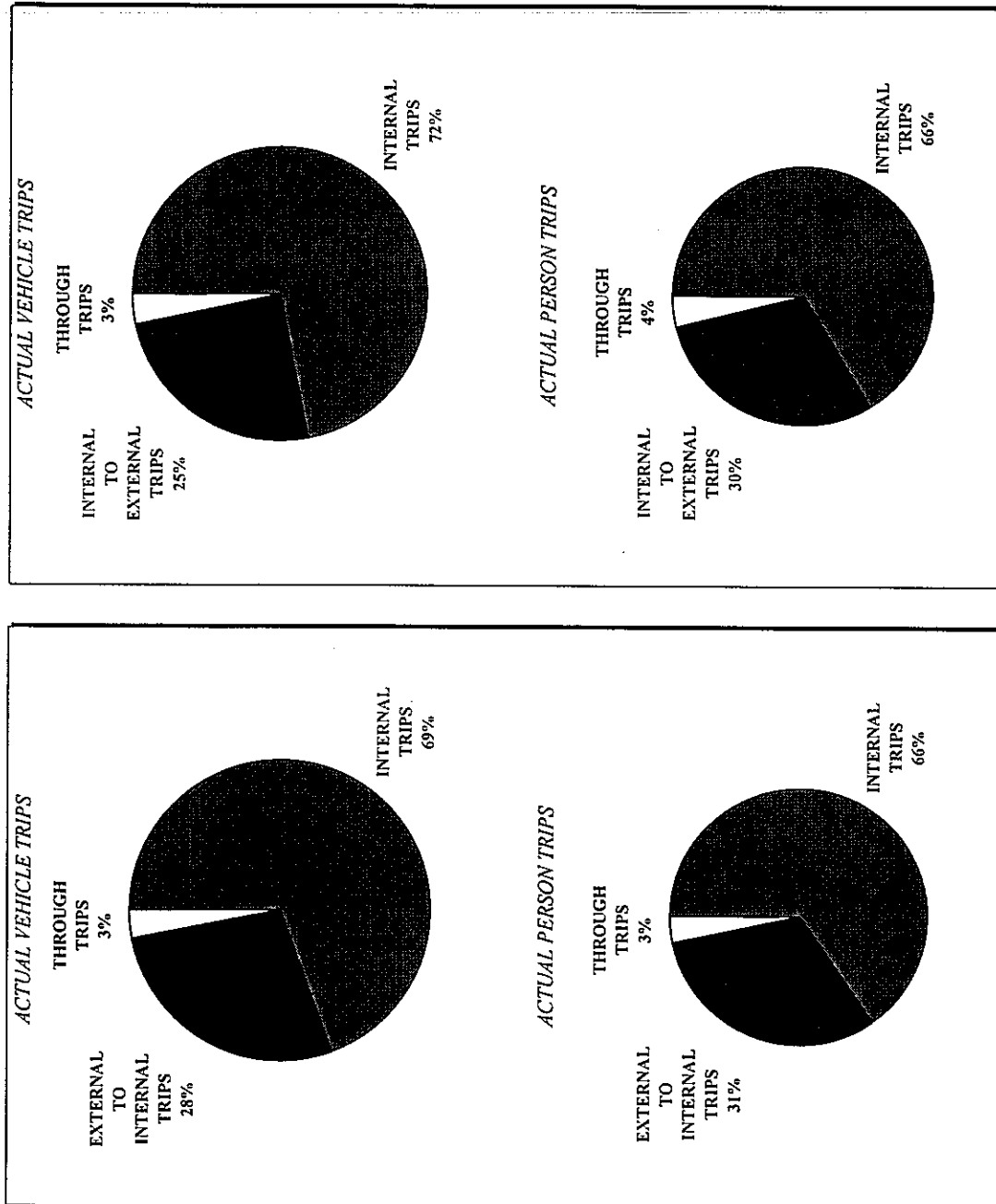
Total Number of Interviews = 503 (27% of Traffic Stream)

Traffic Volumes November 3, 1995

Location	8 AM - 11 AM	1 PM - 4 PM	24 hr vol.
EB SR 89A @ Airport Rd.	2961	3598	13,911
WB SR 89A @ Airport Rd.	2711	3442	13,332
NB SR 89A north of Uptown	1216	1702	7,039
SB SR 89 A north of Uptown	569	927	3,568
NB SR 179 @ Mallard Drive	1498	1691	7,325
SB SR 179 @ Mallard Drive	1098	1847	6,434

Trip Types

The trip data collected during the On Route Interviews was divided between Internal Trips, External to Internal Trips, Internal to External Trip, and Through Trips. An Internal Trip is define as a trip that begins and ends within the study area. An External to Internal trip begins outside the study area and ends within the study area, conversely, an Internal to External trip begins within the study area and ends outside the study area. A Through Trip is defined as a trip that begins and ends outside the study area, but does pass through the study area. Figure 19 shows the proportion of each trip type based on the interviews.

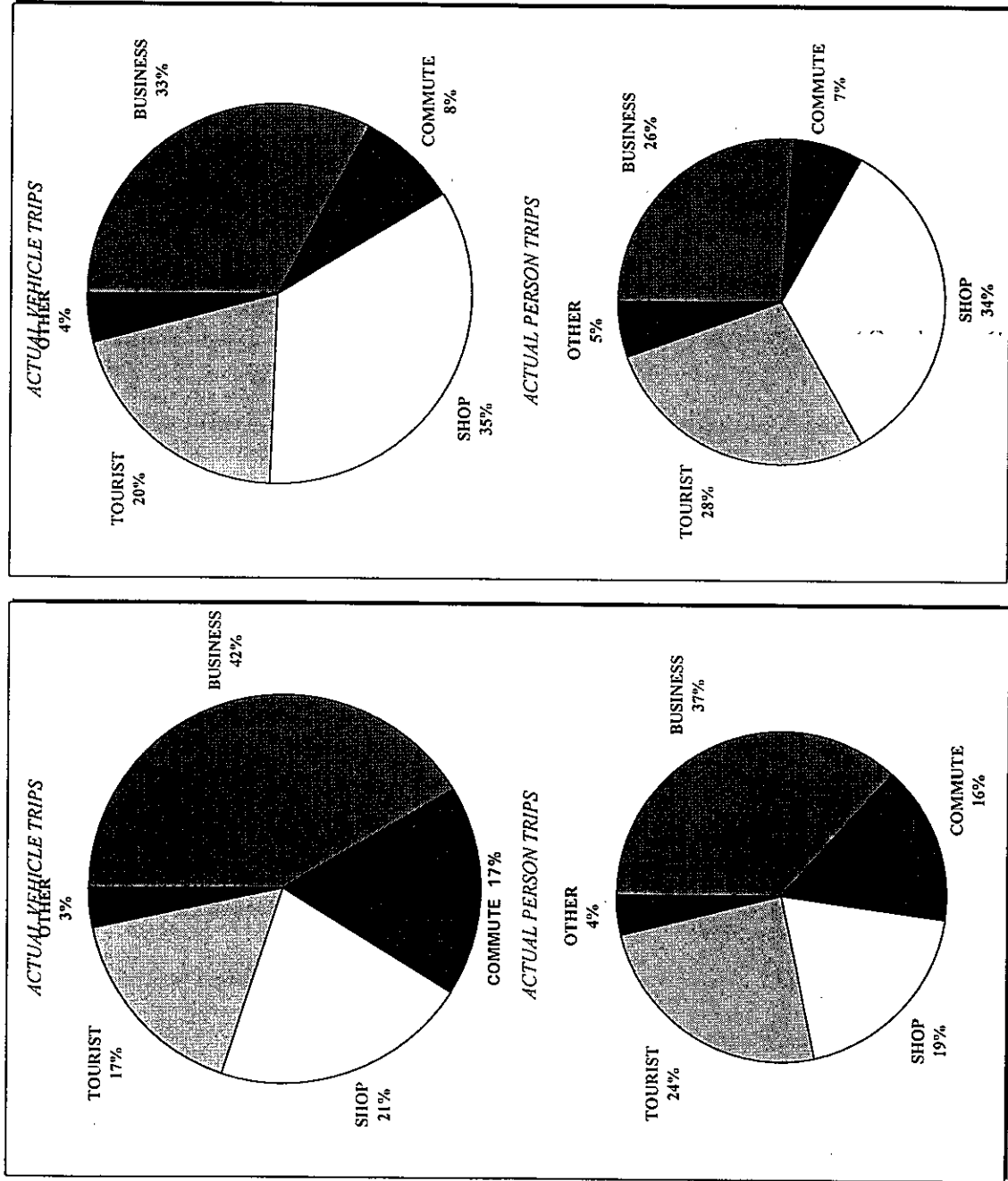


EASTBOUND

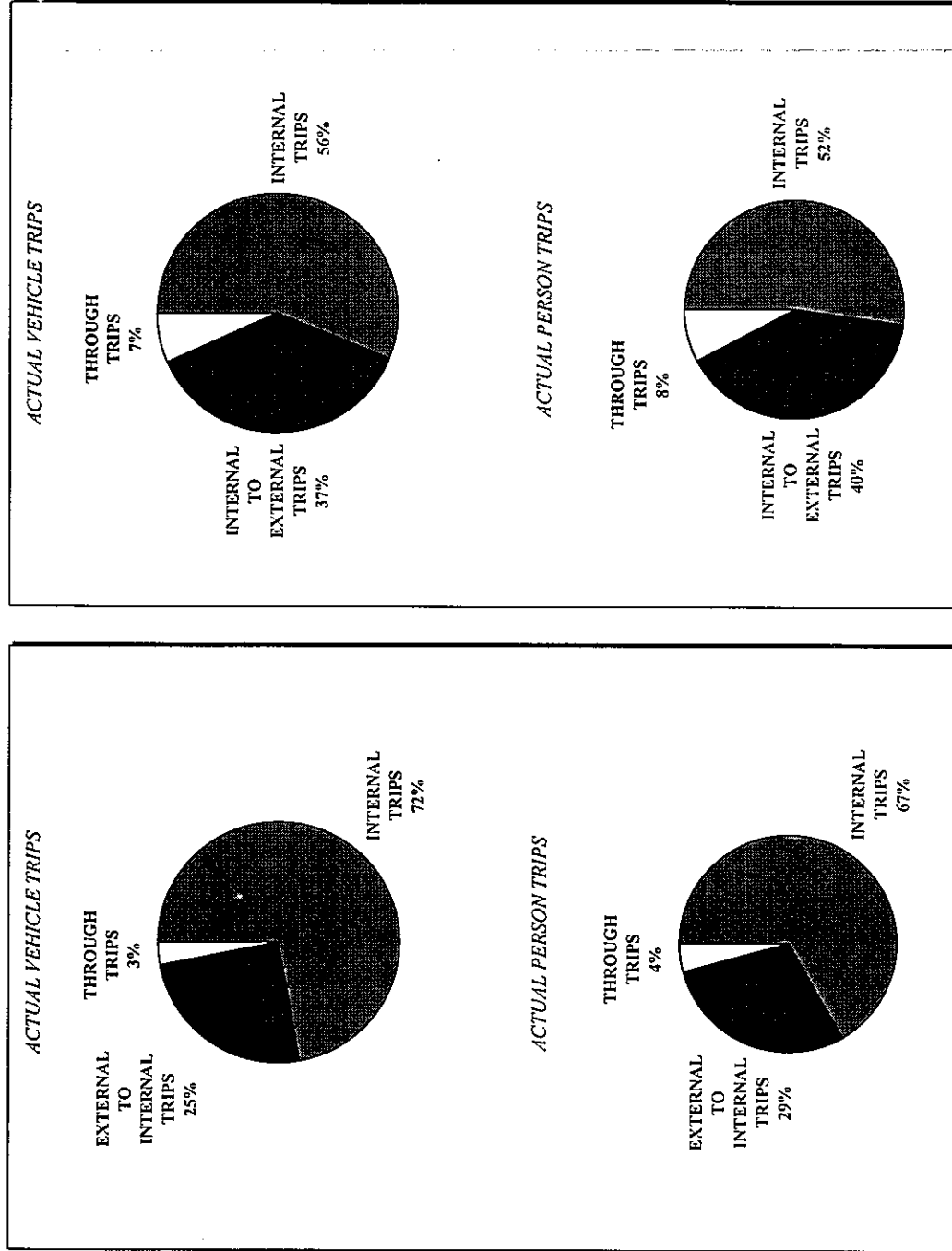
WESTBOUND

CHAMHILL

Figure 17



CHAM HILL EASTBOUND WESTBOUND **Figure 18**



NORTHBOUND

SOUTHBOUND



Figure 19

Trip Purpose

The trip data collected was divided between the various trip purposes that were included in the interview form. These trip purposes included, Commuter, Shopping, Business, Tourist/Recreational, and Through. Figure 20 shows the proportion of each trip purpose based on the interviews.

SR 179 Saturday

Northbound

November 4, 1995 8:00 AM to 11:00 AM

Total Number of Interviews = 606 (38% of Traffic Stream)

Southbound

November 4, 1995 1:00 PM to 3:00 PM

Total Number of Interviews = 306 (25% of Traffic Stream)

Traffic Volumes November 4, 1995

Location	8 AM - 11 AM	1 PM - 3 PM	24 hr vol.
EB SR 89A @ Airport Rd.	2474	2349	12,836
WB SR 89A @ Airport Rd.	2425	2153	11,659
NB SR 89A north of Uptown	1219	1677	7,937
SB SR 89 A north of Uptown	587	807	4,136
NB SR 179 @ Mallard Drive	1585	1256	6,402
SB SR 179 @ Mallard Drive	1017	1225	6,923

Trip Types

The trip data collected during the On Route Interviews was divided between Internal Trips, External to Internal Trips, Internal to External Trip, and Through Trips. An Internal Trip is define as a trip that begins and ends within the study area. An External to Internal trip begins outside the study area and ends within the study area, conversely, an Internal to External trip begins within the study area and ends outside the study area. A Through Trip is defined as a trip that begins and ends outside the study area, but does pass through the study area. Figure 21 shows the proportion of each trip type based on the interviews.

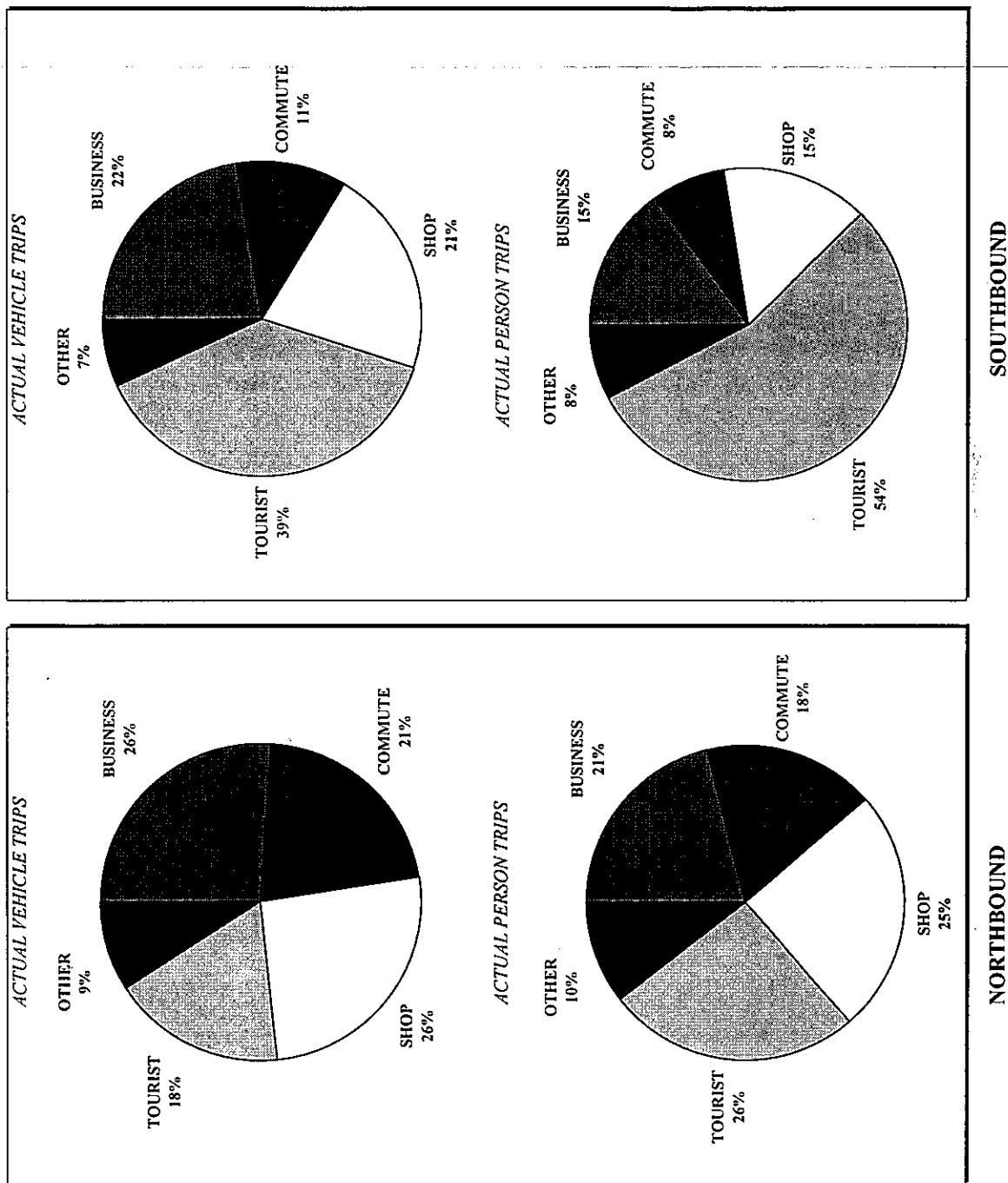
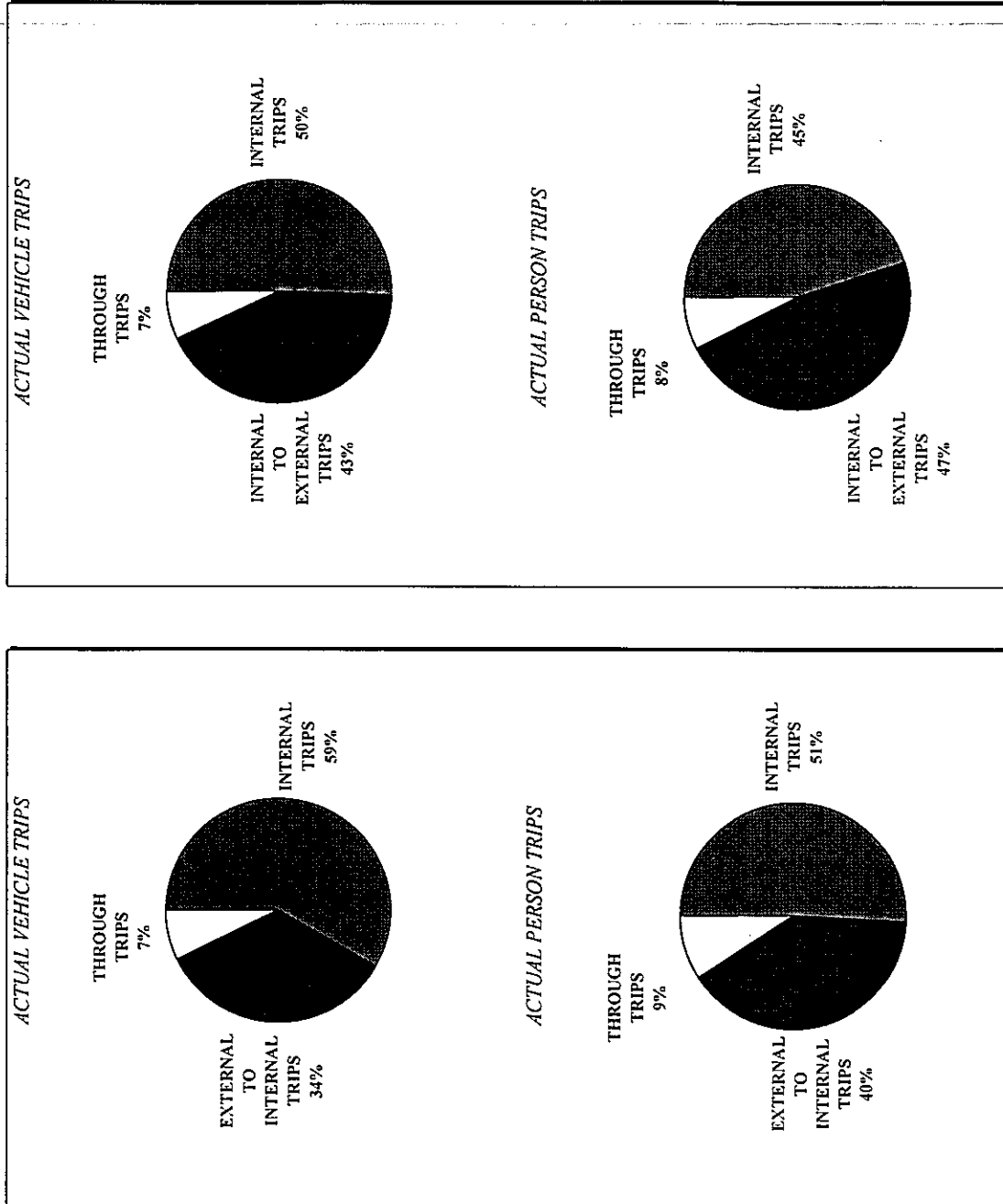


Figure 20



NORTHBOUND SOUTHBOUND
Figure 21



Trip Purpose

The trip data collected was divided between the various trip purposes that were included in the interview form. These trip purposes included, Commuter, Shopping, Business, Tourist/Recreational, and Through. Figure 22 shows the proportion of each trip purpose based on the interviews.

Parking Study

The objective of the Uptown area Parking Study is to understand how the various parking facilities are being utilized by the public. Although the information does not specifically address any of the ten questions from the work session, it will be valuable information for assessing traffic conditions in the Uptown area as part of the Sedona Highway Corridor Circulation System Assessment. The parking study included a sampling of parking along SR 89A, city street parking, and off street parking lots in the Uptown area.

Locations

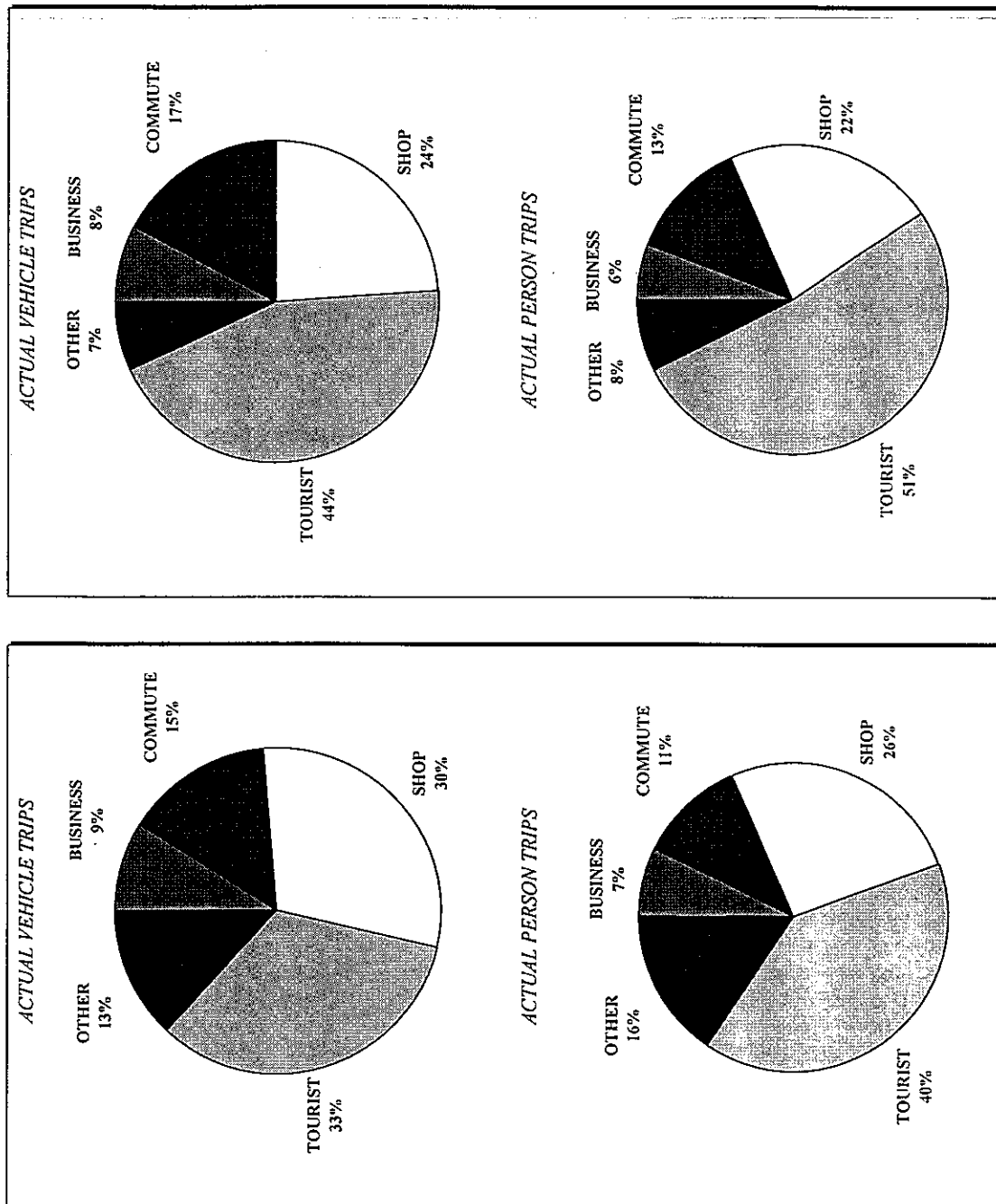
A representative sampling of the various parking facilities within the commercial area of Uptown was included in the study. On Street parking was included along both sides of SR 89A from Forest Road to Apple Ave, and along the east side of Jordan Road between SR 89A and Apple Ave. A sampling of reserved business parking and restricted parking areas along Jordan Road and east of SR 89A was included, as well as the top level of the Sinagua Parking structure. Business parking stalls selected included employee parking, motel guest only parking, jeep tour parking, and general use.

Sampling Method

The primary data recorded during the parking survey was the state of registration and last three digits of the vehicle license plate in each parking stall. A blank entry in the data indicated that the stall was vacant. Additionally, random interviews were collected from persons arriving or departing from parking areas.

Two walking circuits, each assigned one data recorder, were established to collect the data, each circuit required approximately 30-40 minutes to complete. Each data recorder repeated collecting data for their assigned circuit throughout the day, documenting the begin and end time of each circuit. If a vehicle was parked in a stall for a duration that spanned multiple circuits, it's license information was reentered to document that the parking duration of that vehicle was longer than one complete circuit.

One measurement of parking operations is the occupancy rate of the facilities. The Uptown Parking study monitored both on-street parking and parking lots. A total of 323 stalls were monitored from 9:00 AM to 5:00 PM on Friday October 27, and Saturday October 28, 1995. For purpose of discussion, the parking stalls were divided into two groups, Roadway Right of Way Stalls are the on-street parking areas along SR89A and Jordan Road, and the remaining stalls are in the Parking Lot classification. A total of 152 stalls are included in the



NORTHBOUND



SOUTHBOUND

Figure 22

Roadway ROW group, or 47% of the total, and the remaining 171 stalls (53%) were located in parking lots.

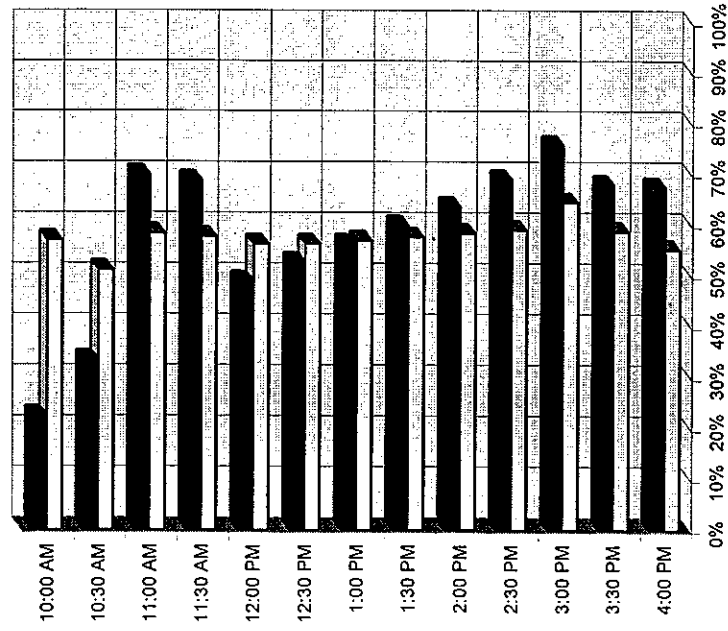
The roadway ROW parking becomes fully utilized mid-morning and remains near capacity until late afternoon. As demand for parking increases, utilization of the parking lot areas increases to a mid-afternoon peak. Figures 23 and 24 graphically display the occupancy rates of the parking facilities throughout the day. It should be noted that when occupancy of the roadway ROW reaches 47% of the total, this group of stalls is fully utilized.

Duration

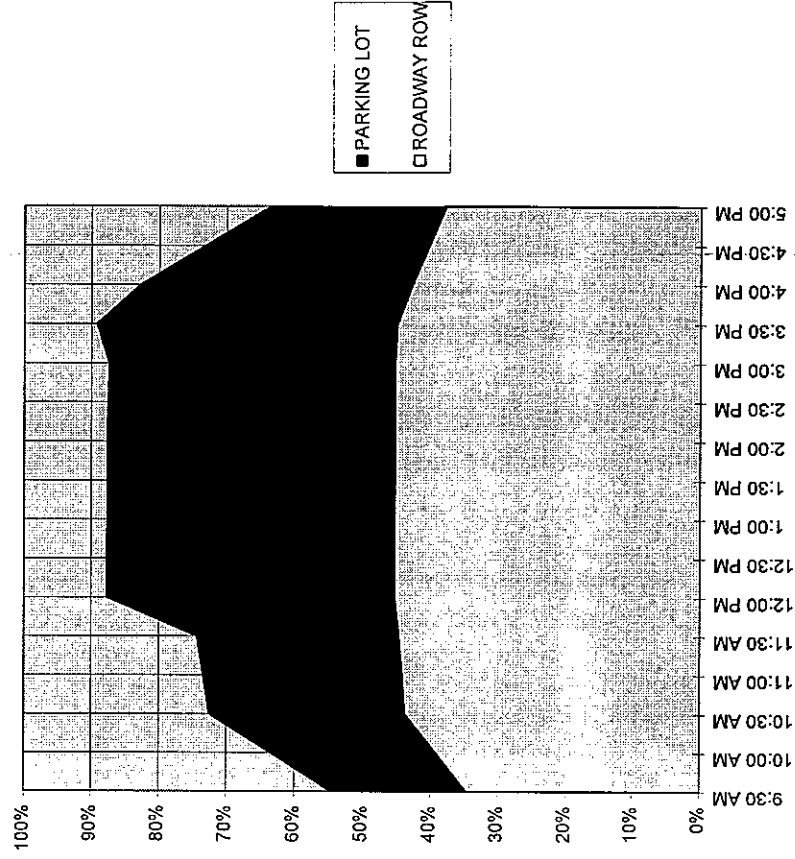
A second measurement of parking operations is the length of time a vehicle remains in a stall. This is referred to as the parking duration. During the Uptown Parking Study the data recorders made walking circuits of 30-40 minutes in duration. Therefore, vehicle information for each stall was recorded every 30-40 minutes. If the same vehicle was recorded in the same stall on two consecutive circuits, that vehicle had been parked for a minimum duration of 30 minutes, and up to a maximum duration of 80 minutes.

Since the actual time of parking duration for each vehicle can not be accurately calculated, the vehicles were divided into two categories, Short Term Duration and Long Term Duration. A Short Term Duration is defined as a vehicle that was only recorded on one walking circuit, or a parking duration of less than 30 minutes. Long Term Duration is defined as a vehicle that was recorded for more than one walking circuit, or a parking duration of greater than 30 minutes. Figures 23 and 24 graphically display the proportion of Long Term Parking in the roadway ROW stalls and Parking lot stalls throughout the study period.

PERCENTAGE OF LONG TERM PARKING

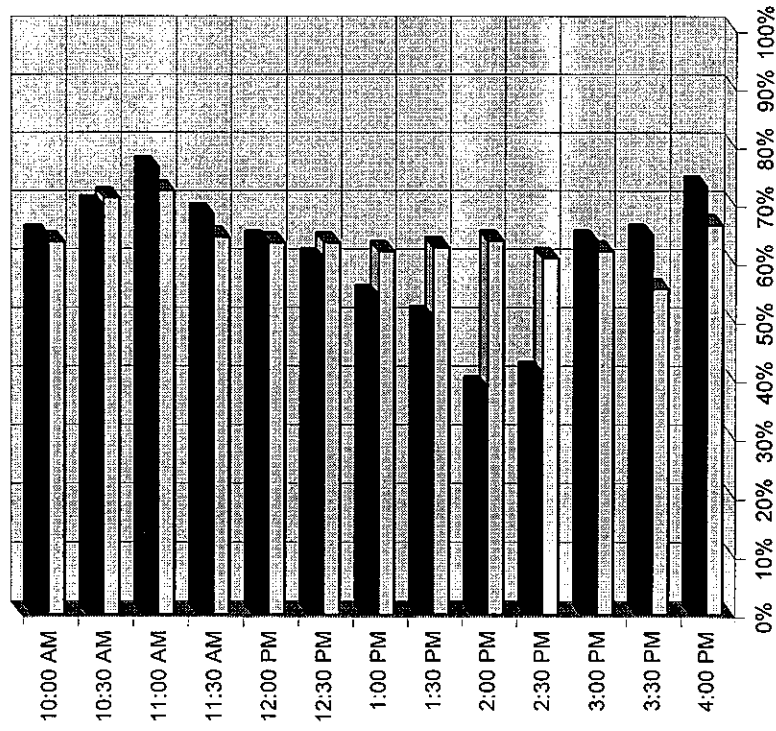


PARKING STALL OCCUPANCY

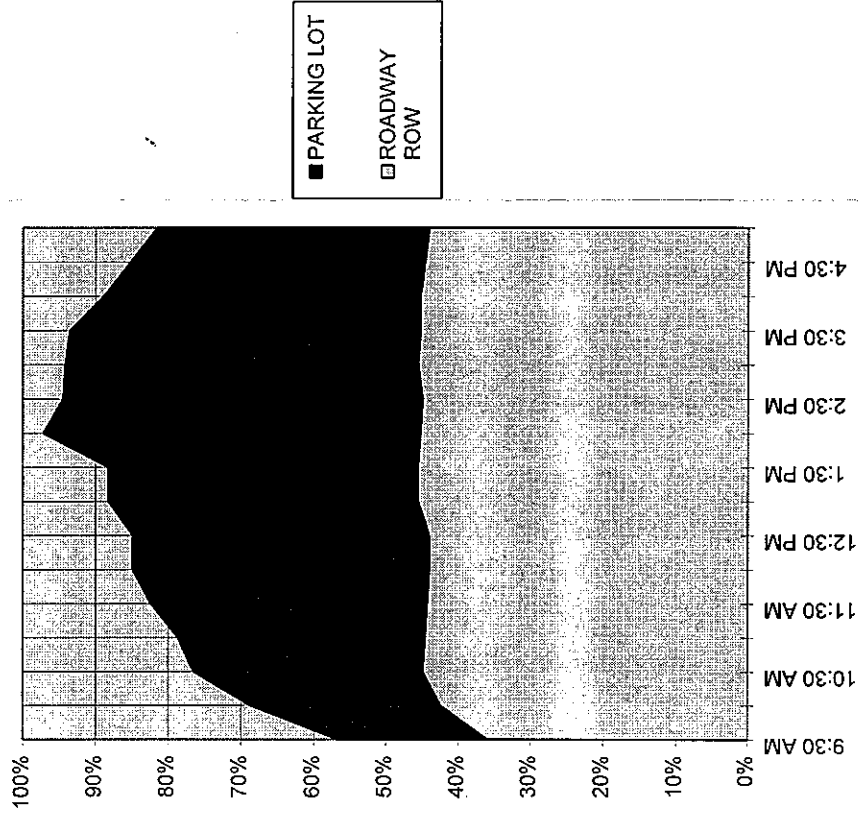


UPTOWN PARKING (SATURDAY)

PERCENTAGE OF LONG TERM PARKING



PARKING STALL OCCUPANCY



Discussion of Findings

The City of Sedona can reorganize the parking in the Uptown area to improve access to the local businesses. The Uptown area is predominantly a shopping district, and there typically are two types of shopping trips, the errand trip and the browsing trip. Errand trips are made by shoppers who already know what they are shopping for, and these trips usually result in short term parking durations. Browsing trips are made by shoppers that do not have a specific item to purchase and want to look in several shops to see what is available, creating long term parking durations.

People who want to park in the uptown area use the facilities that are most convenient. The information displayed in figures 23 and 24 for occupancy shows that the roadway ROW parking is utilized much more than the parking lot areas. This higher utilization comes from convenience, the on-street parking is the first parking available, and therefore used first. The occupancy information also shows that as parking demand increases and on-street parking becomes unavailable, drivers search the parking lots and utilize these facilities as a second choice.

Since over half of the durations of on-street parking are long term, these drivers are parking on the street out of convenience, and short term parking is being forced to the parking lots. The data also reveals that short term parking will occur in off-street parking lots if no other choice is available. The information displayed in figures 23 and 24 for duration shows that over half of the vehicles parked in the on-street stalls are long term. Typically on-street parking is used by errand shoppers who wish to make one short stop and go, shoppers who wish to browse typically are willing to park in off street parking lots because they have already planned to spend time walking between several stores. In many situations if convenient short term parking is not available, short term shoppers will not shop in the area. The fact that the parking lots contain a high proportion of short term parking indicates that facilities within a couple of blocks from SR89A are not prohibitive to short term parking and will park in less convenient facilities.

Resident Questionnaire

A short questionnaire was mailed to all Sedona residents in early December of 1995. The main objective of the resident questionnaire was to establish the travel patterns of the local residents, and to verify the trip generation rate assumptions used in the Sedona Traffic Model.

Sampling Method

The questionnaire mailed to the residents included a street map of Sedona with the Traffic Analysis Zones (TAZ) used in the Sedona Traffic Model highlighted. The residents were asked to indicate which TAZ they resided in and then indicate the TAZ's to which primary trips are made. The residents were asked to indicate commuter, shopping, and school trips separately. Residents were asked to mail their completed forms back to the City of Sedona. An example of the questionnaire mailed to the residents is depicted in Table 2.

Estimation of Sampling Error

The estimation of sampling error is similar to that discussed in the On Route Interview section. The confidence interval used is 95%, the sample size is equal to the number of returned questionnaires (1553), and the total population equals the number of questionnaires mailed out (7500±).

City of Sedona

Off-Highway Circulation Assessment Resident Questionnaire

About this questionnaire . . .

A *trip* is defined as traveling from a point of origin to a point of destination. For example if you travel to the post office, then to the supermarket, you have made two trips. Likewise, traveling to and from work is considered two trips.

1. Referring to the enclosed map, identify the numbed area you live in: _____
2. How many vehicles are normally operated from your household? _____

Primary
Vehicle Secondary
Vehicle

3. Referring to the enclosed map, identify the numbed area(s) you work in:
☐ I don't work outside my home.
4. How many trips per week do you make to that area?
5. Referring to the enclosed map, which numbered area(s) do you shop most in ?
6. Approximately how many trips per week do you make to that area(s)?
7. Referring to the enclosed map, which numbered area do you or a member of your household travel to for school ?
8. Approximately how many trips per week do you make to that area?
9. Referring to the enclosed map, to what other numbered area(s) do you frequently travel ?
10. Approximately how many trips per week do you make to that area(s)?
11. What is your primary purpose for these trips?

☐ Business Trips
 ☐ Recreational Trips
 ☐ Other

Thank you for your input...

To return by mail, please fold questionnaire with the City of Sedona return address to the outside and tape shut. Questionnaires may also be returned in person to City Hall.

City of Sedona Traffic Model Validation

Trip Generation

The data received from the O-D Study can help validate the City of Sedona Traffic Model. Trip generation represents the number of trips that are produced by each household on any given day. The resident questionnaire asked residents to list the number of commuter, shopping, and other trips they make each week. From this information it can be derived how many trips are produced from each household.

Commuter

The current trip rate used in the traffic model is within the confidence range of the value calculated from the Resident Survey. The average number commuter trips calculated from the resident questionnaires is 1.66 Trips/Household \pm .42 Trips. The trip generation rate currently used in the City of Sedona Traffic Model for commuter trips (Home Based Work) is 1.33 Trips/Household.

Shopping

The current trip rate used in the model is within the confidence range of the value calculated from the Resident Survey. The average number of shopping trips calculated from the resident questionnaires is 3.07 Trips/Household \pm 0.96 Trips. The trip generation rate currently used in the City of Sedona Traffic Model for shopping trips (Home Based Other) is 3.00 Trips/Household.

Total Trip Rate

The current total trip rate used in the model is within the confidence range of the value calculated from the Resident Survey, however, the value is at the low end of the range. The average number of total trips calculated from the resident questionnaires is 7.35 Trips/Household \pm 2.66 Trips. the total trip generation rate (Productions + Attractions) used in the City of Sedona Traffic Model is 4.93 Trips/Household. Consideration should be made to raise the total trip generation rate of Household trips, this can be done by increasing current values (Commuter and Shopping), or by producing Tourist/Recreational trips from the households.

Trip Distribution

Trip distribution is calculated by connecting a trip from a production trip end to an attraction trip end. Trips are primarily produced at households (commuter, and shopping) or businesses (work related trips), and trips are primarily attracted to areas of employment and commercial centers. To Validate the trip distribution of the Sedona Traffic

Model one should compare areas of attraction in the model to what has been derived from the O-D study data.

Commuter

Based on a comparison between the areas that attract the highest commuter trips, Uptown and Central West Sedona, the model is replicating the commuter pattern of the residents adequately. Area 4 (Uptown) is calculated to attract $25 \pm 1.8\%$ of the commuter trips based on the Resident Survey. Area 8 and 2 combined (Central West Sedona) is estimated to attract $38 \pm 2.0\%$ of the commuter trips. The City of Sedona Traffic Model currently attracts 27% of all commuter (Home Based Work) trips to Uptown, and 34% to the Central West Sedona area. The current proportions of trips are not within the confidence range of the calculated proportions from the resident survey, however the general commuter pattern is being reproduced by the traffic model.

Shopping

The current method for predicting resident shopping trips in the City of Sedona Traffic Model must be modified to better predict the behavior of the residents. The calculated proportion of resident shopping trips to be attracted to the Uptown area is only $7 \pm 1.1\%$ and the proportion to Area 8 (Central West Sedona) is estimated at $70 \pm 1.9\%$. The City of Sedona Traffic Model is currently attracting 28% of the resident shopping trips (Home Based Other) to Uptown, this is significantly higher than the results of the Resident Survey. The proportion of shopping trips attracted to Area 8 is 27%, indicating that the model is splitting the shopping trips of the resident nearly equal between the two shopping districts.

Tourist

The current method for predicting tourist trips should be modified to better replicate the trip patterns of the tourists displayed from the O-D Study data. The On Route interviews give an indication of where the tourist trips are attracted to. The following reveals the number of tourist trip ends calculated for Uptown vs. Central West Sedona.

On Route Interview	Uptown	Central West Sedona
SR89A	$35 \pm 3\%$	$21 \pm 2.6\%$
SR 179 Fri.	$54 \pm 3.1\%$	$7 \pm 1.6\%$
SR 179 Sat	$55 \pm 3.1\%$	$6 \pm 1.5\%$

From the data presented, one would conclude, a far greater number of tourist trips are attracted to the Uptown area as compared to Central West Sedona. The City of Sedona Traffic Model currently predicts that 32% of the total tourist trip ends are attracted to the Central West Sedona area and 38% to the Uptown area. The model should distribute a larger proportion of tourist trips to the Uptown area than what is currently being predicted.

External Trips

The On Route interviews revealed a small percentage of trips on the state highway system within Sedona are through trips. The various interview locations consistently show a percentage of through trips of 3% to 5%. The City of Sedona Traffic Model is predicting through volume proportions as high as 25% to 30%. The proportion of through trips predicted by the model should be reduced.

Recommendations

The City of Sedona Traffic model trip patterns of the residential shopping trips and tourist trips should be modified. These two types of trips are primarily attracted to two employment categories, Retail/Entertainment and Restaurant/Lodging. These two categories comprise the majority of the City of Sedona service industry, however, there are two distinctly different sets of services within the city. One set of services is geared to serve the residents of the city, examples include; grocery stores, banks, post office, fast food, hardware, ect., and the second provides services to the tourist industry, including; art galleries, restaurants, resorts, souvenir stores, ect.

The employment categories of Retail/Entertainment and Restaurant/Lodging should be eliminated and these employment attractions separated into two new categories, Resident Services and Tourist Services. This will allow the model to better replicate the resident and tourist trip patterns, and increase the reliability of model predictions.

[The following text is a dense, continuous block of illegible characters and symbols, likely representing a corrupted or redacted document. It contains no discernible words or structure.]

ATTENDEES: Chris Fetzer / NACOG Dana Schmidt / Sedona Police
Tom Pender / City of Sedona Tom Schafer / City of Sedona
Dale Buskirk / ADOT Mike Raber / City of Sedona
Dennis Kiefer / ADOT Bill Towler / Coconino County
Tom Goodman / ADOT Jim Culbreth / ~~Yavapai~~ ^{Navajo} County
~~Andrea Juhlin~~ / City of Sedona Steve Blue / CH2M HILL
Audrey
FROM: Mike Kies / CH2M HILL
DATE: October 5, 1995

The work-session began at approximately 9:30 AM with all attendees being introduced.

Mike Raber began the work-session with a general overview of the objectives of the day;

The work-session was scheduled to help determine if the City of Sedona should initiate an Origin-Destination Study and what the results would be best used for. The City is interested in obtaining a better understanding of the appropriate uses for results from the O-D Study and the outputs from the transportation model. What information can be collected from an O-D Study that can help to calibrate the transportation model more completely. How can the completion of an O-D Study benefit the other agencies and what data would need to be collected to realize those benefits.

The objectives of the O-D Study would be;

- Enhance the Calibration of the Transportation Model
- Provide a factual basis for Project Evaluation
- Better understand the benefits of Off-Highway Connections
- Quantify the number and patterns of Through trips vs. Local trips

Steve Blue was introduced and facilitated the remainder of the work session. He began by discovering from the attendees what applications would the results of an O-D Study be used for;

- **Understanding Current Behavior** - The area around Sedona draws millions of tourists each year, What is the current travel behavior of the tourist travelers, and what is the travel behavior of the local residents. The point was brought up that many residents in the area are retired and have large amounts of discretionary time. Local travel behavior may not be average but may be influenced by the large amount of retired persons.

-
- **Calibration of the Traffic Model** - The traffic model inherently contains many assumptions, however, some of these assumptions, such as trip purpose and trip generation, can be better defined with information provided from an O-D Study. Output parameters, such as trip length, can be confirmed with results obtained from an O-D Study.
 - **Factual Basis for Decisions** - Many decisions that our elected officials are asked to make require backup data that better clarify the choices that can be made.
 - **Corridor and Regional Significance of the State Highway System** - What type of trips are being made on the State Highway System in the Sedona Area. Are they primarily local commuter trips, what proportion of the trips are through trips that don't make any stops, and what proportion are external to internal trips.

The conclusion of these discussions was that the O-D Study needs to clearly the differences between Tourist Trip Behavior and Local Trip Behavior. The results should provide the community with the information required to address their concerns, and be available for other agency use.

Ten basic questions that should be answered by the O-D Study were produced from the discussions;

1. What are the Trip Patterns of the Local Residents?
2. How do the Trips use the State System (i.e. Commuting, Ex-internal, Ex-Ex)?
3. What are the destinations of the Tourist Trips?
4. What information can help determine off-highway connections?
5. What volume of trips would use a new link between SR 179 and SR 89A?
6. What are the trip lengths for trips originating outside the area?
7. What trips would use transit?
8. What Key Destinations would support a transit system?
9. Consideration of Pedestrian and Bicycle Facilities
10. What would be the benefits and effects of the Red Rock Crossing?

Following identification of the basic questions to be answered by the O-D Study, the discussions turned to Data Collection, When and Where would data collection best be done.

The City of Sedona has periodic fluctuations in the total population because of the varying components.

Permanent Local Population - Those people that live full time in the area.

Part-Time Local Population - Those people who own a second home in the Sedona area, however their permanent residence is elsewhere. The total number of these residents fluctuates throughout the year but tends to peak during the warmer months.

Tourist Population - Those people who are visiting the area for a limited duration, this population peaks in the summer months and diminishes greatly after October.

The most important questions that need to be answered about data collection are;

How Precise?

How Extensive?

It was decided that the data collection for the study should be concluded by the middle of November at the latest. This will insure that a significant number of tourists are still present in the population.

The following matrix of Data Elements vs. Questions was filled in by the participants

Data Element	Questions									
	1	2	3	4	5	6	7	8	9	10
Origin	X	X	X	X	X	X	X			
Destination	X	X	X	X	X	X	X	X		
Purpose	X	X	X			X	X			
Length of Trip	X	X	X	X	X		X			
Travel Time										
Route										
Frequency	X			X	X	X				
Veh Occupancy										
Driver Age										
Driver Occupation										
Trip Cost										
Terminal Type	X									
Mode Transfer										
Trip Type I-I	X	X	X		X					
Trip Type EX-I	X	X	X		X	X		X		
Trip Type EX-EX		X	X		X	X		X		
Parking	X		X							

From the matrix, it was concluded that the significant data items to be collected would be;

- Origin
- Destination
- Trip Purpose
- Trip Length
- Frequency of Trip
- Trip Type (I-I, EX-I, EX-EX)
- Parking

It was suggested to use three methods of data collection to collect all of the data information required and to include all sections of the population base.

On Route Interviews - The On Route Interviews would be done on SR 89A, and SR 179 each direction with one of the interviews being done in each peak hour on each interview day. This makes a total of four On Route Interviews per interview day as follows;

- | | |
|---------------------|---------------|
| • Eastbound SR 89A | AM Peak Hours |
| • Northbound SR 179 | AM Peak Hours |
| • Westbound SR 89A | PM Peak Hours |
| • Southbound SR 179 | PM Peak Hours |

The On Route Interviews will identify Origin, Destination, Trip Purpose, Trip Frequency, Residency, and Vehicle Occupancy of each vehicle stopped. From this information, Trip Length, and Trip Type can be determined.

The On Route Interviews would be done by a team of eight , 5 Interviewers, One City of Sedona Police Officer, an Assistant to the Officer, and a Team Supervisor. The Interviews will be done on a Thursday, Friday, and Saturday, and continuous tube counts would be taken through out the time period.

Parking Survey - The Parking Surveys would be done along the on street parking in the Uptown area and in two selected parking lots. The surveyors will walk a one-half hour loop, recording the last digits and state of the license plate in each stall. If the surveyor is able to interview people arriving into a parking stall or preparing to leave a parking stall they would try to interview the people for the same information asked in the on-route survey.

The Parking Survey will identify Destination, Parking Duration and Residency of the parked vehicles, random interviews would add Origin, Trip Purpose, and Vehicle Occupancy. From this information, Parking Occupancy, and Trip Generation per Parking Space can be determined.

Local Questionnaires - The local questionnaire would return information from the local residents. The questionnaire would identify, Origins, Destinations, Trip Purposes, Trip Frequency, Terminal Types, Modes of Transport, Preferred Routes, Driver Age, and Driver Occupation.

ACTION PLAN

<u>Task</u>	<u>Responsibility</u>
Contact DPS and Sedona Police	City of Sedona
Contact ADOT District	City of Sedona
Set Primary Target Dates and Alternatives	City of Sedona
Organize Volunteers	City of Sedona
Train Volunteers	CH2M HILL
Identify On Route Interview Locations	CH2M HILL
Layout Questionnaires	CH2M HILL
Traffic Control Plan	City of Sedona / ADOT